

Refine Search

Search Results -

Terms	Documents
6255458.pn.	1

Database:

- US Pre-Grant Publication Full-Text Database
- US Patents Full-Text Database
- US OCR Full-Text Database
- EPO Abstracts Database
- JPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

Search:

L11

Refine Search

Recall Text

Clear

Interrupt

Search History

DATE: Wednesday, December 08, 2004 [Printable Copy](#) [Create Case](#)

Set Name	Query	Hit Count	Set Name
side by side			result set

DB=USPT; PLUR=YES; OP=ADJ

<u>L11</u>	6255458.pn.	1	<u>L11</u>
<u>L10</u>	6255458.pn.	1	<u>L10</u>
<u>L9</u>	6300129	1	<u>L9</u>
<u>L8</u>	5569825.pn.	1	<u>L8</u>
<u>L7</u>	5789650.pn.	1	<u>L7</u>
<u>L6</u>	5545806.pn.	1	<u>L6</u>
<u>L5</u>	5661016.pn.	1	<u>L5</u>
<u>L4</u>	5814318.pn.	1	<u>L4</u>
<u>L3</u>	5814318.pn.	0	<u>L3</u>
<u>L2</u>	5625126.pn.	1	<u>L2</u>
<u>L1</u>	5770429.pn.	1	<u>L1</u>

END OF SEARCH HISTORY

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:02 ; Search time 2155.96 Seconds
 (without alignments)
 8839.572 Million cell updates/sec

Title: US-08-728-463B-205
 Perfect score: 403
 Sequence: 1 ATGAAACACCTGTGGTTCTT.....CCTGGTCACCGTCTCTCAG 403

Scoring table: IDENTITY_NUC
 Gapop 10.0 , Gapext 1.0

Searched: 4526729 seqs, 23644849745 residues

Total number of hits satisfying chosen parameters: 9053458

Minimum DB seq length: 0
 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
 Maximum Match 100%
 Listing first 45 summaries

Database : GenEmbl:*
 1: gb_ba:*
 2: gb_htg:*
 3: gb_in:*
 4: gb_om:*
 5: gb_ov:*
 6: gb_pat:*
 7: gb_ph:*
 8: gb_pl:*
 9: gb_pr:*
 10: gb_ro:*
 11: gb_sts:*
 12: gb_sy:*
 13: gb_un:*
 14: gb_vi:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query		DB	ID	Description
		Match	Length			
1	403	100.0	403	6	AR161374	AR161374 Sequence
2	403	100.0	403	6	AR369967	AR369967 Sequence
3	403	100.0	403	6	BD096601	BD096601 Transgeni

4	391.4	97.1	404	6	AR161372	AR161372 Sequence
5	391.4	97.1	404	6	AR369965	AR369965 Sequence
6	391.4	97.1	404	6	BD096599	BD096599 Transgeni
7	383.8	95.2	524	6	AR161428	AR161428 Sequence
8	383.8	95.2	524	6	AR369973	AR369973 Sequence
9	383.8	95.2	524	6	BD096607	BD096607 Transgeni
10	383.8	95.2	4926	6	AR161427	AR161427 Sequence
11	383.8	95.2	4926	6	AR370022	AR370022 Sequence
12	383.8	95.2	4926	6	BD096656	BD096656 Transgeni
13	365	90.6	417	9	AF062158	AF062158 Homo sapi
14	363.6	90.2	420	9	AF062101	AF062101 Homo sapi
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16	360.4	89.4	417	9	HUMIGHW	M74018 Homo sapien
17	358.6	89.0	417	9	AF062181	AF062181 Homo sapi
18	357.8	88.8	408	9	HST14X23	Z75374 H.sapiens m
19	357.6	88.7	426	9	AF062152	AF062152 Homo sapi
20	354.4	87.9	426	9	AF062192	AF062192 Homo sapi
21	354	87.8	420	9	AF062196	AF062196 Homo sapi
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24	350.4	86.9	412	9	AY204761	AY204761 Homo sapi
25	350.2	86.9	411	9	AF062183	AF062183 Homo sapi
26	349.4	86.7	421	9	AY204755	AY204755 Homo sapi
27	349.2	86.7	432	9	HSVHFE5	Z47234 H.sapiens m
28	348.6	86.5	462	9	AF062146	AF062146 Homo sapi
29	345.8	85.8	429	9	AF062250	AF062250 Homo sapi
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ALIGNMENTS

RESULT 1

AR161374

LOCUS AR161374 403 bp DNA linear PAT 17-OCT-2001

DEFINITION Sequence 357 from patent US 6255458.

ACCESSION AR161374

VERSION AR161374.1 GI:16227234

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 403)
AUTHORS Lonberg,N. and Kay,R.M.
TITLE High affinity human antibodies and human antibodies against digoxin
JOURNAL Patent: US 6255458-A 357 03-JUL-2001;
FEATURES Location/Qualifiers
source 1. .403
/organism="unknown"
/mol_type="unassigned DNA"

ORIGIN

Query Match 100.0%; Score 403; DB 6; Length 403;
Best Local Similarity 100.0%; Pred. No. 3.6e-104;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

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Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
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Db    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240

Qy    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360

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RESULT 2

AR369967
LOCUS AR369967 403 bp DNA linear PAT 12-SEP-2003
DEFINITION Sequence 205 from patent US 6300129.
ACCESSION AR369967
VERSION AR369967.1 GI:34606407
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 403)
AUTHORS Lonberg,N. and Kay,R.M.
TITLE Transgenic non-human animals for producing heterologous antibodies
JOURNAL Patent: US 6300129-A 205 09-OCT-2001;

FEATURES
 source 1. .403
 /organism="unknown"
 /mol_type="genomic DNA"

ORIGIN

Query Match 100.0%; Score 403; DB 6; Length 403;
 Best Local Similarity 100.0%; Pred. No. 3.6e-104;
 Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAAACACCTGTGGTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
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Qy 121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
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Qy 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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 Db 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Qy 361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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 Db 361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403

RESULT 3
 BD096601
 LOCUS BD096601 403 bp DNA linear PAT 27-AUG-2002
 DEFINITION Transgenic non-human animals capable of producing heterologous antibodies.
 ACCESSION BD096601
 VERSION BD096601.1 GI:22642189
 KEYWORDS JP 2001527386-A/128.
 SOURCE unidentified
 ORGANISM unidentified
 unclassified.
 REFERENCE 1 (bases 1 to 403)
 AUTHORS Lonberg,N. and Kay,R.M.
 TITLE Transgenic non-human animals capable.of producing heterologous antibodies
 JOURNAL Patent: JP 2001527386-A 128 25-DEC-2001;
 GENPHARM INTERNATIONAL
 COMMENT OS Unidentified

PN JP 2001527386-A/128
 PD 25-DEC-2001
 PF 01-DEC-1997 JP 1998525687
 PR 02-DEC-1996 US 08/758417
 PI NILS LONBERG, ROBERT M KAY
 PC C12N5/00, C12N5/28, C12N5/24, C12N5/10, C07K16/00, A61K39/00 CC
 Strandedness: Single;
 CC Topology: Linear;
 CC Transgenic non-human animals capable of
 producing heterologous
 CC antibodies
 FH Key Location/Qualifiers
 FT source 1. .403
 FT /organism='Unidentified'.

FEATURES Location/Qualifiers
 source 1. .403
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ORIGIN

Query Match 100.0%; Score 403; DB 6; Length 403;
 Best Local Similarity 100.0%; Pred. No. 3.6e-104;
 Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	ATGAAACACCTGTGGTTCTTCCTCCTCGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	60
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Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Qy	121	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	121	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG	240
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Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Qy	301	CTGAGCTCTGTGACCGCCGCGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	360
Db	301	CTGAGCTCTGTGACCGCCGCGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	360
Qy	361	TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG	403
Db	361	TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG	403

RESULT 4

AR161372

LOCUS AR161372 404 bp DNA linear PAT 17-OCT-2001

DEFINITION Sequence 355 from patent US 6255458.
 ACCESSION AR161372
 VERSION AR161372.1 GI:16227232
 KEYWORDS .
 SOURCE Unknown.
 ORGANISM Unknown.
 Unclassified.
 REFERENCE 1 (bases 1 to 404)
 AUTHORS Lonberg,N. and Kay,R.M.
 TITLE High affinity human antibodies and human antibodies against digoxin
 JOURNAL Patent: US 6255458-A 355 03-JUL-2001;
 FEATURES Location/Qualifiers
 source 1..404
 /organism="unknown"
 /mol_type="unassigned DNA"
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Query Match 97.1%; Score 391.4; DB 6; Length 404;
 Best Local Similarity 99.7%; Pred. No. 7.5e-101;
 Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db      72 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy      121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db      132 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 191

Qy      181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
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Qy      361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
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Db      372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404
  
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RESULT 5
 AR369965
 LOCUS AR369965 404 bp DNA linear PAT 12-SEP-2003
 DEFINITION Sequence 203 from patent US 6300129.
 ACCESSION AR369965
 VERSION AR369965.1 GI:34606405
 KEYWORDS .

SOURCE Unknown.
 ORGANISM Unknown.
 Unclassified.
 REFERENCE 1 (bases 1 to 404)
 AUTHORS Lonberg,N. and Kay,R.M.
 TITLE Transgenic non-human animals for producing heterologous antibodies
 JOURNAL Patent: US 6300129-A 203 09-OCT-2001;
 FEATURES Location/Qualifiers
 source 1..404
 /organism="unknown"
 /mol_type="genomic DNA"

ORIGIN

Query Match 97.1%; Score 391.4; DB 6; Length 404;
 Best Local Similarity 99.7%; Pred. No. 7.5e-101;
 Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db      72 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy     121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Db     132 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 191

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
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Db     192 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 251

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Db     252 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 311

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Qy     361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
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Db     372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404
  
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RESULT 6

BD096599

LOCUS BD096599 404 bp DNA linear PAT 27-AUG-2002

DEFINITION Transgenic non-human animals capable of producing heterologous antibodies.

ACCESSION BD096599

VERSION BD096599.1 GI:22642187

KEYWORDS JP 2001527386-A/126.

SOURCE unidentified

ORGANISM unidentified

unclassified.

REFERENCE 1 (bases 1 to 404)
AUTHORS Lonberg, N. and Kay, R.M.
TITLE Transgenic non-human animals capable of producing heterologous antibodies
JOURNAL Patent: JP 2001527386-A 126 25-DEC-2001;
GENPHARM INTERNATIONAL
COMMENT OS Unidentified
PN JP 2001527386-A/126
PD 25-DEC-2001
PF 01-DEC-1997 JP 1998525687
PR 02-DEC-1996 US 08/758417
PI NILS LONBERG, ROBERT M KAY
PC C12N5/00, C12N5/28, C12N5/24, C12N5/10, C07K16/00, A61K39/00 CC
Strandedness: Single;
CC Topology: Linear;
CC Transgenic non-human animals capable of
producing heterologous
CC antibodies
FH Key Location/Qualifiers
FT source 1..404
FT /organism='Unidentified'.

FEATURES Location/Qualifiers
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ORIGIN

Query Match 97.1%; Score 391.4; DB 6; Length 404;
Best Local Similarity 99.7%; Pred. No. 7.5e-101;
Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
      |||
Db      12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      72 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy     121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     132 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 191

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      |||
Db     192 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 251

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     252 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA 311

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
      |||
Db     312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371

Qy     361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393

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Db 372 TTCCACCCCTGGGGCCAGGGAACCCTGGTCACC 404

RESULT 7

AR161428

LOCUS AR161428 524 bp DNA linear PAT 17-OCT-2001

DEFINITION Sequence 419 from patent US 6255458.

ACCESSION AR161428

VERSION AR161428.1 GI:16227305

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 524)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE High affinity human antibodies and human antibodies against digoxin

JOURNAL Patent: US 6255458-A 419 03-JUL-2001;

FEATURES Location/Qualifiers

source 1..524

/organism="unknown"

/mol_type="unassigned DNA"

ORIGIN

Query Match 95.2%; Score 383.8; DB 6; Length 524;

Best Local Similarity 97.0%; Pred. No. 1.1e-98;

Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Db 13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCTGTCTCAG 72

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db 73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy 121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Db 133 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
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Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
|
Db 313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy 361 TTCCACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
|
Db 373 TTCCACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415

RESULT 8

AR369973

LOCUS AR369973 524 bp DNA linear PAT 12-SEP-2003

DEFINITION Sequence 219 from patent US 6300129.

ACCESSION AR369973

VERSION AR369973.1 GI:34606413

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 524)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE Transgenic non-human animals for producing heterologous antibodies

JOURNAL Patent: US 6300129-A 219 09-OCT-2001;

FEATURES Location/Qualifiers

source 1..524

/organism="unknown"

/mol_type="genomic DNA"

ORIGIN

Query Match 95.2%; Score 383.8; DB 6; Length 524;

Best Local Similarity 97.0%; Pred. No. 1.1e-98;

Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Db      313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

QY      361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db      373 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415

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RESULT 9

BD096607

LOCUS BD096607 524 bp DNA linear PAT 27-AUG-2002

DEFINITION Transgenic non-human animals capable of producing heterologous

antibodies.

ACCESSION BD096607

VERSION BD096607.1 GI:22642195

KEYWORDS JP 2001527386-A/134.

SOURCE unidentified

ORGANISM unidentified

unclassified.

REFERENCE 1 (bases 1 to 524)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE Transgenic non-human animals capable of producing heterologous antibodies

JOURNAL Patent: JP 2001527386-A 134 25-DEC-2001;
GENPHARM INTERNATIONAL

COMMENT OS Unidentified

PN JP 2001527386-A/134

PD 25-DEC-2001

PF 01-DEC-1997 JP 1998525687

PR 02-DEC-1996 US 08/758417

PI NILS LONBERG,ROBERT M KAY

PC C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC

Strandedness: Single;

CC Topology: Linear;

CC Transgenic non-human animals capable of producing heterologous antibodies

FH Key Location/Qualifiers

FT source 1. .524

FT /organism='Unidentified'.

FEATURES Location/Qualifiers

source 1. .524

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Query Match 95.2%; Score 383.8; DB 6; Length 524;

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Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Db 373 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415

RESULT 10

AR161427

LOCUS AR161427 4926 bp DNA linear PAT 17-OCT-2001

DEFINITION Sequence 418 from patent US 6255458.

ACCESSION AR161427

VERSION AR161427.1 GI:16227303

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 4926)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE High affinity human antibodies and human antibodies against digoxin

JOURNAL Patent: US 6255458-A 418 03-JUL-2001;

FEATURES Location/Qualifiers

source 1..4926

/organism="unknown"

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Query Match 95.2%; Score 383.8; DB 6; Length 4926;

Best Local Similarity 97.0%; Pred. No. 1.1e-98;

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Db 148 TGCCTGTCTATGGTGGTTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

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Qy 361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db 388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430

RESULT 11

AR370022

LOCUS AR370022 4926 bp DNA linear PAT 12-SEP-2003

DEFINITION Sequence 268 from patent US 6300129.

ACCESSION AR370022

VERSION AR370022.1 GI:34606462

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 4926)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE Transgenic non-human animals for producing heterologous antibodies

JOURNAL Patent: US 6300129-A 268 09-OCT-2001;

FEATURES Location/Qualifiers
 source 1. .4926
 /organism="unknown"
 /mol_type="genomic DNA"

ORIGIN

Query Match 95.2%; Score 383.8; DB 6; Length 4926;
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Db 28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

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Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
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Db 208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 267

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Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Qy 361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db 388 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430

RESULT 12

BD096656

LOCUS BD096656 4926 bp DNA linear PAT 27-AUG-2002

DEFINITION Transgenic non-human animals capable of producing heterologous antibodies.

ACCESSION BD096656

VERSION BD096656.1 GI:22642244

KEYWORDS JP 2001527386-A/183.

SOURCE unidentified

ORGANISM unidentified

unclassified.

REFERENCE 1 (bases 1 to 4926)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE Transgenic non-human animals capable of producing heterologous antibodies

JOURNAL Patent: JP 2001527386-A 183 25-DEC-2001;

GENPHARM INTERNATIONAL

COMMENT OS Unidentified

PN JP 2001527386-A/183

PD 25-DEC-2001

PF 01-DEC-1997 JP 1998525687

PR 02-DEC-1996 US 08/758417

PI NILS LONBERG,ROBERT M KAY

PC C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC

Strandedness: Single;

CC Topology: Linear;

CC Transgenic non-human animals capable of producing heterologous

antibodies

FH Key Location/Qualifiers

FT source 1. .4926

FT /organism='Unidentified'.

FEATURES Location/Qualifiers

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ORIGIN

Query Match 95.2%; Score 383.8; DB 6; Length 4926;

Best Local Similarity 97.0%; Pred. No. 1.1e-98;

Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Db      28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 87

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy     121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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 Db 328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387
 Qy 361 TTCGACCCCTGGGGCCAGGGAACCCCTGGTCACCGTCTCCTCAG 403
 |||||
 Db 388 TTCGACCCTTGGGGCCAGGGAACCCCTGGTCACCGTCTCCTCAG 430

RESULT 13

AF062158

LOCUS AF062158 417 bp mRNA linear PRI 08-MAY-2001

DEFINITION Homo sapiens clone 45u-33 immunoglobulin heavy chain variable region (IGH) mRNA, partial cds.

ACCESSION AF062158

VERSION AF062158.1 GI:3170778

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 417)

AUTHORS Wang,X. and Stollar,B.D.

TITLE Immunoglobulin VH gene expression in human aging

JOURNAL Clin. Immunol. 93 (2), 132-142 (1999)

MEDLINE 99459182

PUBMED 10527689

REFERENCE 2 (bases 1 to 417)

AUTHORS Wang,X. and Stollar,B.D.

TITLE Direct Submission

JOURNAL Submitted (22-APR-1998) Biochemistry Department, Tufts University School of Medicine, 136 Harrison Ave., Boston, MA 02111, USA

FEATURES

source

Location/Qualifiers

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CDS

1. .>417

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Qy      359  -----GGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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RESULT 14

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AF062101
LOCUS      AF062101          420 bp      mRNA      linear      PRI 08-MAY-2001
DEFINITION Homo sapiens clone 2lu-6 immunoglobulin heavy chain variable region
            (IGH) mRNA, partial cds.
ACCESSION  AF062101
VERSION    AF062101.1  GI:3170664
KEYWORDS
SOURCE     Homo sapiens (human)
ORGANISM   Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

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REFERENCE 1 (bases 1 to 420)
AUTHORS Wang,X. and Stollar,B.D.
TITLE Immunoglobulin VH gene expression in human aging
JOURNAL Clin. Immunol. 93 (2), 132-142 (1999)
MEDLINE 99459182
PUBMED 10527689

REFERENCE 2 (bases 1 to 420)
AUTHORS Wang,X. and Stollar,B.D.
TITLE Direct Submission
JOURNAL Submitted (22-APR-1998) Biochemistry Department, Tufts University
School of Medicine, 136 Harrison Ave., Boston, MA 02111, USA

FEATURES
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Matches 394; Conservative 0; Mismatches 9; Indels 15; Gaps 1;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

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Qy 350 ----TAATTAATTGGTTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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RESULT 15

HST22X18

LOCUS HST22X18 411 bp mRNA linear PRI 30-APR-1997

DEFINITION H.sapiens mRNA for Ig heavy chain variable region (VH4DJ) (clone T22.18).

ACCESSION Z75392

VERSION Z75392.1 GI:2062055

KEYWORDS immunoglobulin; immunoglobulin heavy chain; immunoglobulin superfamily; variable region.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 411)

AUTHORS Tonnelle,C., D'Ercole,C., Depraetere,V., Metras,D., Boubli,L. and Fougereau,M.

TITLE Human thymic B cells largely overexpress the VH4 Ig gene family. A possible role in the control of tolerance in situ?

JOURNAL Int. Immunol. 9 (3), 407-414 (1997)

MEDLINE 97244170

PUBMED 9088979

REFERENCE 2 (bases 1 to 411)

AUTHORS Tonnelle,C.

TITLE Direct Submission

JOURNAL Submitted (26-JUN-1996) Cecile Tonnelle, Centre d'Immunologie Marseille Luminy, Marseille, 13288, France

FEATURES Location/Qualifiers

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sig_peptide 1. .57

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ORIGIN

Query Match 90.0%; Score 362.8; DB 9; Length 411;
Best Local Similarity 94.9%; Pred. No. 1.1e-92;
Matches 389; Conservative 0; Mismatches 12; Indels 9; Gaps 1;

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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

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Searched: 4134886 seqs, 2624710521 residues

Total number of hits satisfying chosen parameters: 8269772

Minimum DB seq length: 0

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Maximum Match 100%

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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3	391.4	97.1	404	2	AAT73438	Aat73438 Human imm
4	391.4	97.1	404	2	AAV39236	Aav39236 Functiona
5	391.4	97.1	404	2	AAZ21990	Aaz21990 Partial n
6	389	96.5	401	2	AAZ21992	Aaz21992 Partial n
7	383.8	95.2	524	2	AAT73444	Aat73444 Human imm
8	383.8	95.2	524	2	AAV39292	Aav39292 Synthetic
9	383.8	95.2	524	2	AAZ22046	Aaz22046 Nucleotid
10	383.8	95.2	4926	2	AAV39291	Aav39291 Plasmid p
11	383.8	95.2	4926	2	AAZ22045	Aaz22045 Nucleotid
12	357.8	88.8	417	3	AAA52907	Aaa52907 Human LH1
13	357.8	88.8	417	8	ACC58850	Acc58850 Tumour-sp
14	357.8	88.8	417	10	AAD64349	Aad64349 Human mon
15	353.4	87.7	1507	3	AAA09695	Aaa09695 Human imm
16	345	85.6	462	8	ABZ80006	Abz80006 Human ant
17	344	85.4	426	8	ABZ80001	Abz80001 Anti-hTNF
18	339.4	84.2	7528	4	AAF30316	Aaf30316 Bicistron
19	335.6	83.3	413	2	AAT73434	Aat73434 Human imm
20	335.6	83.3	413	2	AAV39232	Aav39232 Functiona
21	335.6	83.3	413	2	AAZ21986	Aaz21986 Partial n
22	332	82.4	1341	8	ABX15393	Abx15393 Human IgG
23	332	82.4	2674	8	ABX15391	Abx15391 Human IgG

24	330.4	82.0	1341	10	AAD59474	Aad59474 IgG3 anti
25	330.4	82.0	2674	10	AAD59472	Aad59472 RecPolRhD
26	327.8	81.3	1746	3	AAA27382	Aaa27382 Human IGF
27	324.8	80.6	496	2	AAZ24416	Aaz24416 Human bla
28	323.6	80.3	481	8	ABT31871	Abt31871 Anti-CD40
29	321.8	79.9	360	12	ADQ21998	Adq21998 Human sof
30	319.8	79.4	426	6	ABX00190	Abx00190 Mouse DNA
31	319.8	79.4	426	6	ABK71396	Abk71396 DNA encod
32	319.8	79.4	792	6	ABX00205	Abx00205 DNA encod
33	319.8	79.4	792	6	ABK71411	Abk71411 DNA encod
34	319.8	79.4	822	6	ABX00208	Abx00208 DNA encod
35	319.8	79.4	822	6	ABK71414	Abk71414 DNA encod
36	319	79.2	1401	10	ADE28478	Ade28478 Human ant
37	315.8	78.4	1401	10	ADE28470	Ade28470 Human ant
38	312	77.4	417	3	AAA13938	Aaa13938 Human PTH
39	309	76.7	629	6	ABQ56276	Abq56276 Human ova
40	308.4	76.5	467	10	ABZ59692	Abz59692 Anti-TRAI
41	308	76.4	348	2	AAQ42697	Aaq42697 Vh 71-4.
42	308	76.4	348	2	AAQ42700	Aaq42700 VH415. 3/
43	308	76.4	348	2	AAQ42699	Aaq42699 VH411. 3/
44	307.4	76.3	1395	10	ADE28410	Ade28410 Human ant
45	307.2	76.2	397	2	AAZ24417	Aaz24417 Human bla

ALIGNMENTS

RESULT 1

AAT73440

ID AAT73440 standard; DNA; 403 BP.

XX

AC AAT73440;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-OCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1997-235888/21.

XX

ID AAV39238 standard; DNA; 403 BP.
XX
AC AAV39238;
XX
DT 18-DEC-1998 (first entry)
XX
DE Functional gamma transcript isolated from transgenic cell line 10C5.
XX
KW Transgenic animal; human heterologous antibody; transgene;
KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW autoimmune reaction; inflammatory response; transplant rejection;
KW acid induced lung injury; acute adult respiratory distress syndrome;
KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW cystic fibrosis; ss.
XX
OS Synthetic.
OS Homo sapiens.
OS Mus sp.
XX
PN WO9824884-A1.
XX
PD 11-JUN-1998.
XX
PF 01-DEC-1997; 97WO-US021803.
XX
PR 02-DEC-1996; 96US-00758417.
XX
PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 41; Page 303-304; 452pp; English.
XX
CC AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
CC antibody. The sequences are isolated from 5 different transgenic mouse
CC hybridoma cell lines. The specification describes transgenic non-human
CC animals, especially a mouse, which are capable of producing a human
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. The transgenic animals have human heavy and light chain
CC transgenes. The transgenes are capable of functionally rearranging a
CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
CC recombination. The transgenes include a heavy chain transgene comprising
CC at least one V, D and J gene segment, and one constant region gene
CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
CC one V and J gene segment and one constant region gene segment. The gene
CC segments are heterologous to the transgenic animal. The antibody can be
CC used to prevent efflux of neutrophils from vasculature. It can also be
CC used to treat reperfusion injury. CD4 binding antibodies are used to
CC reduce undesirable autoimmune reactions, inflammatory responses and
CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
CC tissue damage and prolong survival in animal models of acute adult
CC respiratory distress syndrome (ARDS) and acid induced lung injury. The

CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis

XX

SQ Sequence 403 BP; 82 A; 118 C; 114 G; 89 T; 0 U; 0 Other;

Query Match 100.0%; Score 403; DB 2; Length 403;
Best Local Similarity 100.0%; Pred. No. 6.8e-104;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
        |||
Db      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
        |||
Db     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy    121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
        |||
Db    121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
        |||
Db    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240

Qy    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
        |||
Db    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
        |||
Db    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360

Qy    361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
        |||
Db    361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
```

RESULT 3

AAT73438

ID AAT73438 standard; DNA; 404 BP.

XX

AC AAT73438;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

QY 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
 |||
 Db 312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371
 QY 361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
 |||
 Db 372 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 404

RESULT 4

AAV39236

ID AAV39236 standard; DNA; 404 BP.

XX

AC AAV39236;

XX

DT 18-DEC-1998 (first entry)

XX

DE Functional gamma transcript isolated from transgenic cell line 6G5.

XX

KW Transgenic animal; human heterologous antibody; transgene;
 KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
 KW autoimmune reaction; inflammatory response; transplant rejection;
 KW acid induced lung injury; acute adult respiratory distress syndrome;
 KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
 KW cystic fibrosis; ss.

XX

OS Synthetic.

OS Homo sapiens.

OS Mus sp.

XX

PN WO9824884-A1.

XX

PD 11-JUN-1998.

XX

PF 01-DEC-1997; 97WO-US021803.

XX

PR 02-DEC-1996; 96US-00758417.

XX

PA (GENP-) GENPHARM INT.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1998-333306/29.

XX

PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
 PT efflux of neutrophils from vasculature, and treat reperfusion injury.

XX

PS Example 41; Page 303; 452pp; English.

XX

CC AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
 CC antibody. The sequences are isolated from 5 different transgenic mouse
 CC hybridoma cell lines. The specification describes transgenic non-human
 CC animals, especially a mouse, which are capable of producing a human
 CC heterologous antibodies of multiple isotypes by undergoing isotype
 CC switching. The transgenic animals have human heavy and light chain
 CC transgenes. The transgenes are capable of functionally rearranging a
 CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)

CC recombination. The transgenes include a heavy chain transgene comprising
 CC at least one V, D and J gene segment, and one constant region gene
 CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
 CC one V and J gene segment and one constant region gene segment. The gene
 CC segments are heterologous to the transgenic animal. The antibody can be
 CC used to prevent efflux of neutrophils from vasculature. It can also be
 CC used to treat reperfusion injury. CD4 binding antibodies are used to
 CC reduce undesirable autoimmune reactions, inflammatory responses and
 CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
 CC tissue damage and prolong survival in animal models of acute adult
 CC respiratory distress syndrome (ARDS) and acid induced lung injury. The
 CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
 CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis

XX

SQ Sequence 404 BP; 87 A; 117 C; 113 G; 87 T; 0 U; 0 Other;

Query Match 97.1%; Score 391.4; DB 2; Length 404;
 Best Local Similarity 99.7%; Pred. No. 1.3e-100;
 Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	60
Db	12	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	71
QY	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	72	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	131
QY	121	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	132	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	191
QY	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG	240
Db	192	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG	251
QY	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	252	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA	311
QY	301	CTGAGCTCTGTGACCGCCGCGGACAGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	360
Db	312	CTGAGCTCTGTGACCGCCGCGGACAGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	371
QY	361	TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC	393
Db	372	TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC	404

RESULT 5

AAZ21990

ID AAZ21990 standard; DNA; 404 BP.

XX

AC AAZ21990;

XX

DT 24-NOV-1999 (first entry)

XX

DE Partial nucleotide sequence for a functional transcript 6G5-gamma.
 XX
 KW Transgenic animal; heterologous antibody; hybridoma; B cell;
 KW transgenic mouse; human heavy chain transgene; digoxin; PCR primer;
 KW human light chain transgene; immortalized cell; immunoglobulin;
 KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;
 KW transplant rejection; blood disorder; coagulation disorder; ss.
 XX
 OS Synthetic.
 OS Homo sapiens.
 XX
 PN WO9945962-A1.
 XX
 PD 16-SEP-1999.
 XX
 PF 12-MAR-1999; 99WO-US005535.
 XX
 PR 13-MAR-1998; 98US-00042353.
 XX
 PA (GENP-) GENPHARM INT INC.
 XX
 PI Lonberg N, Fishwild DM, Ball WJ;
 XX
 DR WPI; 1999-551219/46.
 XX
 PT Novel transgenic non-human animals used to produce heterologous
 PT antibodies.
 XX
 PS Example 41; Page 304; 484pp; English.
 XX
 CC The specification describes transgenic animals that are capable of
 CC producing a heterologous antibody. The antibodies are isolated from a
 CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
 CC having a genome comprising a human heavy chain transgene and a human
 CC light chain transgene. The B cells are fused to immortalized cells
 CC suitable for generating a hybridoma, which produces a detectable amount
 CC of an immunoglobulin that specifically binds digoxin or Shinga-like
 CC toxin. B cells from transgenic animals can be used to generate hybridomas
 CC expressing monoclonal high affinity human sequence antibodies. Antibodies
 CC produced from the transgenic animals of the invention can be used to
 CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
 CC disease, transplant rejection, blood disorders such as coagulation
 CC disorders and other diseases. The present sequence represents a partial
 CC nucleotide sequence for a functional transcript used in the course of the
 CC invention
 XX
 SQ Sequence 404 BP; 87 A; 117 C; 113 G; 87 T; 0 U; 0 Other;

Query Match 97.1%; Score 391.4; DB 2; Length 404;
 Best Local Similarity 99.7%; Pred. No. 1.3e-100;
 Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71
 QY 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Db	72		GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	131
Qy	121		TGCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	132		TGCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	191
Qy	181		GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG	240
Db	192		GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG	251
Qy	241		TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	252		TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA	311
Qy	301		CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	360
Db	312		CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	371
Qy	361		TTCGACCCCTGGGGCCAGGGAACCTGGTCACC	393
Db	372		TTCGACCCCTGGGGCCAGGGAACCTGGTCACC	404

RESULT 6

AAZ21992

ID AAZ21992 standard; DNA; 401 BP.

XX

AC AAZ21992;

XX

DT 24-NOV-1999 (first entry)

XX

DE Partial nucleotide sequence for a functional transcript 10C5-gamma.

XX

KW Transgenic animal; heterologous antibody; hybridoma; B cell;
 KW transgenic mouse; human heavy chain transgene; digoxin; PCR primer;
 KW human light chain transgene; immortalized cell; immunoglobulin;
 KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;
 KW transplant rejection; blood disorder; coagulation disorder; ss.

XX

OS Synthetic.

OS Homo sapiens.

XX

PN WO9945962-A1.

XX

PD 16-SEP-1999.

XX

PF 12-MAR-1999; 99WO-US005535.

XX

PR 13-MAR-1998; 98US-00042353.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Fishwild DM, Ball WJ;

XX

DR WPI; 1999-551219/46.

XX

AAT73444

ID AAT73444 standard; DNA; 524 BP.

XX

AC AAT73444;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-OCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1997-235888/21.

XX

PT Novel anti-CD4 antibody produced by transgenic mice - used in the

PT treatment of auto-immune disease etc.

XX

PS Claim 45; Page 272; 396pp; English.

XX

CC A novel composition has been developed which comprises an immunoglobulin
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC -1 for binding to a predetermined human antigen. The present sequence
CC represents a human light chain variable region partial nucleotide
CC sequence, HC6G5, which encodes an amino acid sequence from a claimed
CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC may be used in therapeutic and diagnostic applications, especially for
CC the treatment of human diseases. These antibodies reduce activity of CD4
CC cells and reduce undesirable autoimmune reactions, inflammatory response
CC and transplant rejection. Transgenic animals are capable of producing
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. These animals produce a first Ig type that is necessary for
CC antigen-stimulated B-cell maturation and can switch to encode and produce
CC one or more subsequent heterologous isotypes

XX

SQ Sequence 524 BP; 106 A; 160 C; 140 G; 118 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 524;

Best Local Similarity 97.0%; Pred. No. 2e-98;

Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

|||||

Db	13	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG	72
Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	73	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	132
Qy	121	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCA	180
Db	133	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA	192
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG	240
Db	193	GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGAAGCACCAACTACAACCCG	252
Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	253	TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA	312
Qy	301	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	360
Db	313	CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	372
Qy	361	TTCGACCCCTGGGGCCAGGGAACCCTGGTCCCGTCTCCTCAG	403
Db	373	TTCGACCCCTGGGGCCAGGGAACCCTGGTCCCGTCTCCTCAG	415

RESULT 8

AAV39292

ID AAV39292 standard; DNA; 524 BP.

XX

AC AAV39292;

XX

DT 18-DEC-1998 (first entry)

XX

DE Synthetic heavy chain sequence HC6G5.

XX

KW Transgenic animal; human heterologous antibody; transgene;

KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;

KW autoimmune reaction; inflammatory response; transplant rejection;

KW acid induced lung injury; acute adult respiratory distress syndrome;

KW ARDS; vasculitis; septic shock; allergic reaction; asthma;

KW cystic fibrosis; ss.

XX

OS Synthetic.

OS Homo sapiens.

XX

PN W09824884-A1.

XX

PD 11-JUN-1998.

XX

PF 01-DEC-1997; 97WO-US021803.

XX

PR 02-DEC-1996; 96US-00758417.

XX

PA (GENP-) GENPHARM INT.

XX

PI Lonberg N, Kay RM;
 XX
 DR WPI; 1998-333306/29.
 XX
 PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
 PT efflux of neutrophils from vasculature, and treat reperfusion injury.
 XX
 PS Example 42; Page 324; 452pp; English.
 XX
 CC The present sequence represents a synthetic heavy sequence (created using
 CC oligonucleotides AAV39279-89). This synthetic sequence differs from
 CC natural sequences in that strings of repeated oligonucleotides are
 CC interrupted (to facilitate oligonucleotide synthesis and PCR
 CC amplification), optimal translation initiation sites are incorporated and
 CC HindII sites were engineered upstream of the translation initiation
 CC sites. The sequence is used to make plasmid pHCG5, which is used in the
 CC construction of minigenes for expression of IgGkappa anti-CD4 antibodies,
 CC in the transgenic mouse of the invention. The specification describes
 CC transgenic non-human animals, especially a mouse, which are capable of
 CC producing a human heterologous antibodies of multiple isotypes by
 CC undergoing isotype switching. The transgenic animals have human heavy and
 CC light chain transgenes. The transgenes are capable of functionally
 CC rearranging a heterologous diversity (D) gene in a variable-diversity-
 CC junction (V-D-J) recombination. The transgenes include a heavy chain
 CC transgene comprising at least one V, D and J gene segment, and one
 CC constant region gene segment. The immunoglobulin (Ig) light chain
 CC transgene comprises at least one V and J gene segment and one constant
 CC region gene segment. The gene segments are heterologous to the transgenic
 CC animal. The antibody can be used to prevent efflux of neutrophils from
 CC vasculature. It can also be used to treat reperfusion injury. CD4 binding
 CC antibodies are used to reduce undesirable autoimmune reactions,
 CC inflammatory responses and rejection of transplanted organs. The anti-IL-
 CC 8 antibodies can reduce tissue damage and prolong survival in animal
 CC models of acute adult respiratory distress syndrome (ARDS) and acid
 CC induced lung injury. The anti-IL-8 antibodies can also be used for the
 CC treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)
 CC and cystic fibrosis
 XX
 SQ Sequence 524 BP; 106 A; 160 C; 140 G; 118 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 524;
 Best Local Similarity 97.0%; Pred. No. 2e-98;
 Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

```

Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
      |||
Db      13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCTGTCTCAG 72

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy      121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db      133 TGCCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy      181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCACCACTACAACCCG 240

```


CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence is used in the course
CC of the invention

XX

SQ Sequence 524 BP; 106 A; 160 C; 140 G; 118 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 524;
Best Local Similarity 97.0%; Pred. No. 2e-98;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

```
Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
      |||
Db      13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCTGTCTCAG 72

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy     121 TGCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     133 TGCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy     161 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      |||
Db     193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGAAGCACCAACTACAACCCG 252

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
      |||
Db     313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy     361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
      |||
Db     373 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415
```

RESULT 10

AAV39291

ID AAV39291 standard; DNA; 4926 BP.

XX

AC AAV39291;

XX

DT 18-DEC-1998 (first entry)

XX

DE Plasmid pHG6G5 nucleotide sequence.

XX

KW Transgenic animal; human heterologous antibody; transgene;

KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
 KW autoimmune reaction; inflammatory response; transplant rejection;
 KW acid induced lung injury; acute adult respiratory distress syndrome;
 KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
 KW cystic fibrosis; ss.
 XX
 OS Synthetic.
 OS Homo sapiens.
 XX
 PN WO9824884-A1.
 XX
 PD 11-JUN-1998.
 XX
 PF 01-DEC-1997; 97WO-US021803.
 XX
 PR 02-DEC-1996; 96US-00758417.
 XX
 PA (GENP-) GENPHARM INT.
 XX
 PI Lonberg N, Kay RM;
 XX
 DR WPI; 1998-333306/29.
 XX
 PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
 PT efflux of neutrophils from vasculature, and treat reperfusion injury.
 XX
 PS Example 42; Page 321-324; 452pp; English.
 XX
 CC The present sequence represents a plasmid, pHCG5, which contains a
 CC synthetic heavy sequence (created using oligonucleotide AAV39267-89).
 CC This synthetic sequence differs from natural sequences in that strings of
 CC repeated oligonucleotides are interrupted (to facilitate oligonucleotide
 CC synthesis and PCR amplification), optimal translation initiation sites
 CC are incorporated and HindII sites were engineered upstream of the
 CC translation initiation sites. The plasmid is used in the construction of
 CC minigenes for expression of IgGkappa anti-CD4 antibodies, in the
 CC transgenic mouse of the invention. The specification describes transgenic
 CC non-human animals, especially a mouse, which are capable of producing a
 CC human heterologous antibodies of multiple isotypes by undergoing isotype
 CC switching. The transgenic animals have human heavy and light chain
 CC transgenes. The transgenes are capable of functionally rearranging a
 CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
 CC recombination. The transgenes include a heavy chain transgene comprising
 CC at least one V, D and J gene segment, and one constant region gene
 CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
 CC one V and J gene segment and one constant region gene segment. The gene
 CC segments are heterologous to the transgenic animal. The antibody can be
 CC used to prevent efflux of neutrophils from vasculature. It can also be
 CC used to treat reperfusion injury. CD4 binding antibodies are used to
 CC reduce undesirable autoimmune reactions, inflammatory responses and
 CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
 CC tissue damage and prolong survival in animal models of acute adult
 CC respiratory distress syndrome (ARDS) and acid induced lung injury. The
 CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
 CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis
 XX
 SQ Sequence 4926 BP; 1121 A; 1455 C; 1296 G; 1054 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 4926;
Best Local Similarity 97.0%; Pred. No. 3.6e-98;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

```
Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
        |||
Db      28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCTGTCTCAG 87

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
        |||
Db     88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy    121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
        |||
Db    148 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 240
        |||
Db    208 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 267

Qy    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
        |||
Db    268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
        |||
Db    328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy    361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
        |||
Db    388 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430
```

RESULT 11

AAZ22045

ID AAZ22045 standard; DNA; 4926 BP.

XX

AC AAZ22045;

XX

DT 24-NOV-1999 (first entry)

XX

DE Nucleotide sequence of plasmid pHG65.

XX

KW Transgenic animal; heterologous antibody; hybridoma; B cell;

KW transgenic mouse; human heavy chain transgene; digoxin;

KW human light chain transgene; immortalized cell; immunoglobulin;

KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;

KW transplant rejection; blood disorder; coagulation disorder; ss.

XX

OS Synthetic.

XX

PN WO9945962-A1.

XX

PD 16-SEP-1999.

XX

PF 12-MAR-1999; 99WO-US005535.

XX
PR 13-MAR-1998; 98US-00042353.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Fishwild DM, Ball WJ;
XX
DR WPI; 1999-551219/46.
XX
PT Novel transgenic non-human animals used to produce heterologous
PT antibodies.
XX
PS Example 42; Page 322-325; 484pp; English.
XX
CC The specification describes transgenic animals that are capable of
CC producing a heterologous antibody. The antibodies are isolated from a
CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC having a genome comprising a human heavy chain transgene and a human
CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence is used in the course
CC of the invention
XX
SQ Sequence 4926 BP; 1121 A; 1455 C; 1296 G; 1054 T; 0 U; 0 Other;

Query Match 95.2%; Score 383.8; DB 2; Length 4926;
Best Local Similarity 97.0%; Pred. No. 3.6e-98;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
      |||
Db      28 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCTGTCTCAG 87

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      88 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 147

Qy     121 TCGCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     148 TCGCTGTCTATGGTGGTTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 207

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      |||
Db     208 GGTAAGGGTCTGGAGTGGATTGGTGAATCAATCATAGTGAAGCACCAACTACAACCCG 267

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     268 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 327

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
      |||

```

Db 328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

Qy 361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403

Db 388 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 430

RESULT 12

AAA52907

ID AAA52907 standard; cDNA; 417 BP.

XX

AC AAA52907;

XX

DT 20-SEP-2000 (first entry)

XX

DE Human LH11238 monoclonal antibody heavy chain variable region cDNA.

XX

KW Human; LH11238 monoclonal antibody; hybridoma; tumour-specific; cancer;

KW cytostatic; cytotoxic; heavy chain variable region; ss.

XX

OS Homo sapiens.

XX

FH	Key	Location/Qualifiers
----	-----	---------------------

FT	CDS	1..417
----	-----	--------

FT		/*tag= a
----	--	----------

FT		/partial
----	--	----------

FT		/product= "LH11238 antibody heavy chain variable region"
----	--	--

FT	sig_peptide	1..57
----	-------------	-------

FT		/*tag= b
----	--	----------

FT	mat_peptide	58..414
----	-------------	---------

FT		/*tag= c
----	--	----------

XX

PN WO200032635-A2.

XX

PD 08-JUN-2000.

XX

PF 01-DEC-1999; 99WO-US028485.

XX

PR 02-DEC-1998; 98US-00203768.

XX

PA (IXSY-) IXSYS INC.

XX

PI Watkins JD, Huse WD;

XX

DR WPI; 2000-412293/35.

DR P-PSDB; AAY99556.

XX

PT New tumor-specific human monoclonal antibody, useful for the treatment

PT and diagnosis of cancer, comprises at least one complementarity

PT determining region.

XX

PS Claim 7; Page 78-79; 84pp; English.

XX

CC The present sequence encodes the heavy chain variable region of a human

CC tumour-specific monoclonal antibody. Neoplastic cells selectively express

CC antigens which are not present on normal cells. Thus monoclonal

CC antibodies can be produced that are specifically directed against tumour-

specific antigens. The antibodies can be conjugated to cytotoxic or cytostatic agents and used to selectively target cancer cells for the elimination of tumours. They can also be linked to diagnostic moieties that allow the imaging of neoplastic cells. Nucleic acids encoding human tumour-specific monoclonal antibodies can be used to express the antibodies and can be recombinantly engineered to produce modified antibodies with higher affinity or higher selectivity for tumour cells. Tumour-specific antibodies were produced by hybridomas that were generated by in vitro immunisation of human spleen cell cultures with breast carcinoma cells. The nucleic acid encoding the monoclonal antibody was then isolated from the hybridoma by RT-PCR. The present sequence encodes a human monoclonal antibody heavy chain variable region which was produced by LH11238 hybridoma cell line

SQ Sequence 417 BP; 88 A; 123 C; 116 G; 90 T; 0 U; 0 Other;

Query Match 88.8%; Score 357.8; DB 3; Length 417;
Best Local Similarity 93.5%; Pred. No. 4.1e-91;
Matches 390; Conservative 0; Mismatches 12; Indels 15; Gaps 1;

[illegible]

RESULT 13

ID ACC58850 standard; cDNA; 417 BP.

AC ACC58850;

DT 08-SEP-2003 (first entry)

XX

DE Tumour-specific human monoclonal antibody LH11238 VH coding region.
 XX
 KW Human; monoclonal antibody; antibody; LH11238; breast cancer;
 KW ovarian cancer; antitumour; therapy; diagnosis; gene; ss.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT CDS 1. .417
 FT /*tag= a
 FT /partial
 FT /product= "LH11238 VH"
 FT /note= "No stop codon"
 XX
 PN WO2003044036-A1.
 XX
 PD 30-MAY-2003.
 XX
 PF 19-NOV-2002; 2002WO-US037134.
 XX
 PR 19-NOV-2001; 2001US-00989901.
 XX
 PA (MOLE-) APPLIED MOLECULAR EVOLUTION INC.
 XX
 PI Watkins JD;
 XX
 DR WPI; 2003-457585/43.
 DR P-PSDB; ABR42859.
 XX
 PT New isolated human monoclonal antibody or its functional fragment
 PT comprising a complementary determining region, useful for reducing
 PT neoplastic cell proliferation, particularly for treating and diagnosing
 PT cancer.
 XX
 PS Disclosure; Page 116-117; 151pp; English.
 XX
 CC This nucleotide sequence encodes the heavy chain variable region of
 CC tumour-specific human monoclonal antibody (MAb) LH11238. The hybridoma
 CC producing this MAb was generated by in vitro immunization of human spleen
 CC cells with breast carcinoma cells, and immortalization of the immunized
 CC lymphocytes by transformation with EBV and fusion with K6H6/B5
 CC heteromyeloma cells. MAb LH11238 specifically binds to an antigen present
 CC on the surface and lysosomal compartments of breast and ovarian carcinoma
 CC cells, as compared to normal fibroblasts, peripheral blood lymphocytes,
 CC melanoma cells or lung carcinoma cells. The invention provides tumour-
 CC specific human MABs and functional fragments of them. These specifically
 CC bind to neoplastic cells compared to normal cells. They are used in
 CC claimed methods of reducing neoplastic cell proliferation and of
 CC detecting a neoplastic cell in a sample, where the neoplastic cell is a
 CC breast cancer, lung cancer or ovarian cancer cell
 XX
 SQ Sequence 417 BP; 88 A; 123 C; 116 G; 90 T; 0 U; 0 Other;

Query Match 88.8%; Score 357.8; DB 8; Length 417;
 Best Local Similarity 93.5%; Pred. No. 4.1e-91;
 Matches 390; Conservative 0; Mismatches 12; Indels 15; Gaps 1;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
 |||
 Db 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
 |||
 Db 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy 121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
 |||
 Db 121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
 |||
 Db 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240

Qy 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
 |||
 Db 241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT----- 353
 |||
 Db 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGAAATAGCAGCT 360

Qy 354 -----TAATTGGTTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
 |||
 Db 361 CGTCCTCACCGATACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 417

RESULT 14

AAD64349

ID AAD64349 standard; DNA; 417 BP.

XX

AC AAD64349;

XX

DT 12-FEB-2004 (first entry)

XX

DE Human monoclonal antibody VH DNA from LH11238 clone.

XX

KW Human; monoclonal antibody; neoplastic cell proliferation; breast cancer;

KW lung cancer; tumour; ovarian cancer cell; heavy chain variable region;

KW VH; cytostatic; gene; ds.

XX

OS Homo sapiens.

XX

FH Key Location/Qualifiers

FT CDS 1. .417

FT /*tag= a

FT /product= "Human monoclonal antibody VH protein"

FT /note= "No stop codon"

FT /partial

XX

PN US2003198638-A1.

XX

PD 23-OCT-2003.

XX

PF 19-NOV-2002; 2002US-00300675.

XX
PR 19-NOV-2001; 2001US-0421146P.
XX
PA (WATK/) WATKINS J D.
XX
PI Watkins JD;
XX
DR WPI; 2003-852771/79.
DR P-PSDB; ABW02445.
XX
PT New tumor-specific human monoclonal antibodies is useful for detecting
PT neoplastic cells in a biological sample, or for reducing proliferation of
PT neoplastic cells, particularly breast cancer, lung cancer or ovarian
PT cancer cells.
XX
PS Disclosure; SEQ ID NO 1; Opp; English.
XX
CC The present invention relates to novel tumour-specific human monoclonal
CC antibodies or their functional fragments. Sequences of the invention are
CC useful for detecting neoplastic cells in a biological sample or for
CC reducing neoplastic cell proliferation, particularly breast cancer, lung
CC cancer or ovarian cancer cells. The present sequence is human monoclonal
CC antibody heavy chain variable region (VH) DNA from LH11238 clone
XX
SQ Sequence 417 BP; 88 A; 123 C; 116 G; 90 T; 0 U; 0 Other;

Query Match 88.8%; Score 357.8; DB 10; Length 417;
Best Local Similarity 93.5%; Pred. No. 4.1e-91;
Matches 390; Conservative 0; Mismatches 12; Indels 15; Gaps 1;

[illegible]

Ov 354 - - - - -TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCAACGTCTCCTCA 402

RESULT 15

AAA09695

ID AAA09695 standard; cDNA; 1507 BP.

XX

AC AAA09695;

XX

DT 01-FEB-2001 (first entry)

XX

DE Human immunoglobulin heavy chain cDNA sequence.

XX

KW Monoclonal antibody; immunoglobulin heavy chain; human; ss.

XX

OS Homo sapiens.

XX

PN WO200058499-A1.

XX

PD 05-OCT-2000.

XX

PF 30-MAR-2000; 2000WO-JP002022.

XX

PR 30-MAR-1999; 99JP-00087929.

XX

PA (NISB) JAPAN TOBACCO INC.

PA (ABGE-) ABGENIX INC.

XX

PI Kusunoki C, Fukushima A;

XX

DR WPI; 2000-611721/58.

DR P-PSDB; AAB26884.

XX

PT Transformation of a hybridoma with a gene encoding an immunoglobulin heavy chain polypeptide for enhanced production of monoclonal antibody.

XX

PS Example 2; Page 35-39; 48pp; Japanese.

XX

CC This invention relates to a method for the production of a monoclonal antibody. The antibody is produced by inserting a gene encoding an immunoglobulin heavy chain polypeptide into cells which produce a monoclonal antibody recognizing the immunoglobulin, and culturing the transformant to express the antibody. The invention also includes monoclonal antibody-expressing cells transformed by the method; and transgenic non-human animals containing the cells and expressing a human antibody. The method results in the enhanced expression of a monoclonal antibody for diagnostic and therapeutic use. The present sequence represents a human immunoglobulin heavy chain cDNA sequence used in an example of the method of the invention

XX

SQ Sequence 1507 BP; 330 A; 498 C; 409 G; 270 T; 0 U; 0 Other;

Query Match 87.7%; Score 353.4; DB 3; Length 1507;
Best Local Similarity 93.4%; Pred. No. 1e-89;
Matches 382; Conservative 0; Mismatches 21; Indels 6; Gaps 1;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
|||||

Db 12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 71

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
 || |||||

Db 72 GTTCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy 121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
 |||||

Db 132 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGACCTGGATCCGCCAGCCCCCA 191

Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
 || |||||

Db 192 GGGAAGGGGCTGGAGTGGATTGGGGAAATCATTCATCATGGAAACACCAACTACAACCCG 251

Qy 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
 |||||

Db 252 TCCCTCAAGAGTCGAGTCTCCATATCAGTTGACACGTCCAAGAACCAGTTCTCCCTGACA 311

Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGA-----GAGTAATT 354
 |||||

Db 312 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGGGGGAGCAGTG 371

Qy 355 AATTGGTTCGACCCCTGGGGCCAGGGAACCCCTGGTCACCGTCTCCTCAG 403
 | ||| |||||

Db 372 GCTGCGTTTGACTACTGGGGCCAGGGAACCCCTGGTCACCGTCTCCTCAG 420

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	403	100.0	403	3	US-09-042-353-357	Sequence 357, Appl
2	403	100.0	403	3	US-08-758-417A-205	Sequence 205, Appl
3	391.4	97.1	404	3	US-09-042-353-355	Sequence 355, Appl
4	391.4	97.1	404	3	US-08-758-417A-203	Sequence 203, Appl
5	383.8	95.2	524	3	US-09-042-353-419	Sequence 419, Appl
6	383.8	95.2	524	3	US-08-758-417A-219	Sequence 219, Appl
7	383.8	95.2	4926	3	US-09-042-353-418	Sequence 418, Appl
8	383.8	95.2	4926	3	US-08-758-417A-268	Sequence 268, Appl
9	357.8	88.8	417	4	US-09-203-768A-1	Sequence 1, Appli
10	335.6	83.3	413	3	US-09-042-353-351	Sequence 351, Appl
11	335.6	83.3	413	3	US-08-758-417A-199	Sequence 199, Appl
12	332	82.4	1341	4	US-09-372-425A-7	Sequence 7, Appli
13	332	82.4	2674	4	US-09-372-425A-1	Sequence 1, Appli
14	304.4	75.5	402	1	US-08-259-372A-5	Sequence 5, Appli
15	304.4	75.5	402	1	US-08-468-671-5	Sequence 5, Appli
16	300	74.4	687	3	US-08-545-809A-34	Sequence 34, Appl
17	298.4	74.0	1567	3	US-09-049-672A-17	Sequence 17, Appl
18	297.8	73.9	1418	3	US-08-793-450-7	Sequence 7, Appli
19	286.4	71.1	426	2	US-08-480-774A-1	Sequence 1, Appli
20	284	70.5	384	2	US-08-477-553A-49	Sequence 49, Appl
21	280.2	69.5	363	2	US-08-477-553A-50	Sequence 50, Appl
22	277.6	68.9	369	3	US-08-793-450-3	Sequence 3, Appli
23	273.8	67.9	1543	4	US-09-800-729-74	Sequence 74, Appl
24	270.2	67.0	1431	3	US-08-487-550-11	Sequence 11, Appl
25	270.2	67.0	1431	4	US-09-526-098-11	Sequence 11, Appl
26	270.2	67.0	1431	4	US-09-383-916-11	Sequence 11, Appl
27	269	66.7	285	3	US-09-042-353-150	Sequence 150, App
28	269	66.7	285	3	US-08-758-417A-414	Sequence 414, App
29	269	66.7	450	4	US-09-582-337-13	Sequence 13, Appl
30	268	66.5	622	3	US-08-545-809A-59	Sequence 59, Appl
31	266.2	66.1	423	3	US-08-803-085-2	Sequence 2, Appli
32	261.6	64.9	372	2	US-08-477-553A-48	Sequence 48, Appl
33	261.6	64.9	650	3	US-08-545-809A-4	Sequence 4, Appli
34	260.6	64.7	1404	3	US-08-523-894-7	Sequence 7, Appli
35	260.6	64.7	1404	3	US-08-523-894-9	Sequence 9, Appli
36	260.6	64.7	1404	3	US-08-523-894-11	Sequence 11, Appl
37	258.8	64.2	321	2	US-08-477-553A-47	Sequence 47, Appl
38	258	64.0	423	1	US-08-379-072A-19	Sequence 19, Appl
39	258	64.0	423	1	US-08-481-869-19	Sequence 19, Appl

40	258	64.0	423	1	US-08-476-237-15	Sequence 15, Appl
41	257.4	63.9	1431	3	US-08-487-550-3	Sequence 3, Appli
42	257.4	63.9	1431	4	US-09-526-098-3	Sequence 3, Appli
43	257.4	63.9	1431	4	US-09-383-916-3	Sequence 3, Appli
44	256.6	63.7	840	3	US-09-260-527-4	Sequence 4, Appli
45	255	63.3	420	1	US-08-478-039-107	Sequence 107, App

ALIGNMENTS

RESULT 1

US-09-042-353-357

; Sequence 357, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/042,353

; FILING DATE: 13-MAR-1998

; CLASSIFICATION: 800

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/810,279

; FILING DATE: 17-DEC-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/853,408

; FILING DATE: 18-MAR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/904,068

; FILING DATE: 23-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/155,301

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; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 357:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 403 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-357

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Query Match          100.0%; Score 403; DB 3; Length 403;
Best Local Similarity 100.0%; Pred. No. 1e-116;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy     121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

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Db      121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
Qy      181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 240
      |||
Db      181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 240
Qy      241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db      241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
Qy      301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
      |||
Db      301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
Qy      361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
      |||
Db      361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403

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RESULT 2

US-08-758-417A-205

; Sequence 205, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992

; ATTORNEY/AGENT INFORMATION:

; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300

; INFORMATION FOR SEQ ID NO: 205:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 403 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear

; MOLECULE TYPE: DNA

; SEQUENCE DESCRIPTION: SEQ ID NO: 205:

US-08-758-417A-205

Query Match 100.0%; Score 403; DB 3; Length 403;
Best Local Similarity 100.0%; Pred. No. 1e-116;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
| | | | |
Db 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
| | | | |
Db 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy 121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
| | | | |
Db 121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
| | | | |
Db 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240

Qy 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGCACGTCCTCAAGAACCAGTTCTCCCTGAAG 300
| | | | |
Db 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGCACGTCCTCAAGAACCAGTTCTCCCTGAAG 300

Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
| | | | |
Db 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360

Qy 361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
| | | | |

Db

361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403

RESULT 3

US-09-042-353-355

; Sequence 355, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0; Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/042,353

; FILING DATE: 13-MAR-1998

; CLASSIFICATION: 800

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/810,279

; FILING DATE: 17-DEC-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/853,408

; FILING DATE: 18-MAR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/904,068

; FILING DATE: 23-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/209,741
 ; FILING DATE: 09-MAR-1994
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/352,322
 ; FILING DATE: 07-DEC-1994
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/544,404
 ; FILING DATE: 10-OCT-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/728,463
 ; FILING DATE: 10-OCT-1996
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: WO PCT/US96/16433
 ; FILING DATE: 10-OCT-1996
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/758,417
 ; FILING DATE: 02-DEC-1996
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: WO PCT/US97/21803
 ; FILING DATE: 01-DEC-1997
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Apple, Randolph T.
 ; REGISTRATION NUMBER: 36,429
 ; REFERENCE/DOCKET NUMBER: 014643-009040US
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (415) 576-0200
 ; TELEFAX: (415) 576-0300
 ; INFORMATION FOR SEQ ID NO: 355:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 404 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: DNA
 US-09-042-353-355

Query Match 97.1%; Score 391.4; DB 3; Length 404;
 Best Local Similarity 99.7%; Pred. No. 4.3e-113;
 Matches 392; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	60
Db	12	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	71
Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	72	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	131
Qy	121	TGCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	132	TGCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	191
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG	240
Db	192	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG	251
Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300

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Db      252  |||||TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA 311
Qy      301  CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
Db      312  |||||CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 371
Qy      361  TTCGACCCCTGGGGCCAGGGAACCCCTGGTCACC 393
Db      372  |||||TTCGACCCCTGGGGCCAGGGAACCCCTGGTCACC 404

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RESULT 4

US-08-758-417A-203

; Sequence 203, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

```

; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 203:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 404 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 203:
US-08-758-417A-203

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Qy	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCA	60
Db	12	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCA	71
Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	72	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	131
Qy	121	TGCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCA	180
Db	132	TGCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCA	191
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG	240
Db	192	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG	251
Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	252	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAA	311
Qy	301	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	360
Db	312	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	371
Qy	361	TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC	393
Db	372	TTCGACCCCTGGGGCCAGGGAACCCTGGTCACC	404

; APPLICANT: Lonberg, Nils
; APPLICANT: Kay, Robert M.
; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
; TITLE OF INVENTION: Producing Heterologous Antibodies
; NUMBER OF SEQUENCES: 421
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,353
; FILING DATE: 13-MAR-1998
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/810,279
; FILING DATE: 17-DEC-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,408
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/904,068
; FILING DATE: 23-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 419:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 524 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-419

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Query Match          95.2%; Score 383.8; DB 3; Length 524;
Best Local Similarity 97.0%; Pred. No. 1.2e-110;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
      |||
Db      13 ATGAAACACCTGTGGTTCTTCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qy     121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     133 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCACCA 192

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      |||
Db     193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGAAGCACCAACTACAACCCG 252

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qy     301 CTGAGCTCTGTGACCGCCGCGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
      |||
Db     313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Qy     361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403

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Db

||||| 373 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415

RESULT 6

US-08-758-417A-219

; Sequence 219, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; ATTORNEY/AGENT INFORMATION:

; NAME: Serafini, Andrew T.

; REGISTRATION NUMBER: 41,303

; REFERENCE/DOCKET NUMBER: 014643-009030US

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (415) 576-0200

TELEFAX: (415) 576-0300

; INFORMATION FOR SEQ ID NO: 219:

SEQUENCE CHARACTERISTICS:

; LENGTH: 524 base pairs

; TYPE: nucleic acid

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; STRANDEDNESS: single

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;                                TOPOLOGY: linear

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MOLECULE TYPE: DNA

SEQUENCE DESCRIPTION: SEO ID NO: 219:

US-08-758-417A-219

Query.Match 95.2%; Score 383.8; DB 3; Length 524;

Best Local Similarity 97.0%; Pred. No. 1.2e-110;

Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

Qv 1 ATGAAACACCTGTGGTTCTTCCTCCTCGGTGGCAGCTCCCAGATGGGGTCCTGTCCCAG 60

[illegible]

Db 13 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCTAGATGGGTCCTGTCTCAG 72

Qv 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

[illegible]

Db 73 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 132

Qv 121 T GCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

[illegible]

Db 133 T G C G C T G T C T A T G G T G G T T C C T T C A G T G G T T A C T A C T G G A G C T G G A T C C G C C A G C C A C C A 192

Ov 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240

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Db 193 GGTAAGGGTCTGGAGTGGATTGGTGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 252

Ov 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

[illegible]

Db 253 TCTCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCTCTGAAA 312

Qv 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360

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Db 313 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 372

Ov 361 TTCGACCCCTGGGGCCAGGGGAACCCTGGGTCACCGTCTCCTCAG 403

[illegible]

Db 373 TTCGACCCTTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 415

RESULT 7

US-09-042-353-418

; Sequence 418, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

APPLICANT: Lonberg, Nils

APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

TITLE OF INVENTION: Producing Heterologous Antibodies

NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

;
; CITY: San Francisco
;
; STATE: California
;
; COUNTRY: USA
;
; ZIP: 94111-3834
;
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
;
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,353
; FILING DATE: 13-MAR-1998
; CLASSIFICATION: 800
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/810,279
; FILING DATE: 17-DEC-1991
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,408
; FILING DATE: 18-MAR-1992
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/904,068
; FILING DATE: 23-JUN-1992
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417

GENERAL INFORMATION:

APPLICANT: Lonberg, Nils
Kay, Robert M.
TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
Producing Heterologous Antibodies

NUMBER OF SEQUENCES: 417

CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94111-3834

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/758,417A
FILING DATE: 02-Dec-1996
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/728,463
FILING DATE: 10-OCT-1996
APPLICATION NUMBER: US 08/544,404
FILING DATE: 10-OCT-1995
APPLICATION NUMBER: US 08/352,322
FILING DATE: 07-DEC-1994
APPLICATION NUMBER: US 08/209,741
FILING DATE: 09-MAR-1994
APPLICATION NUMBER: US 08/165,699
FILING DATE: 10-DEC-1993
APPLICATION NUMBER: US 08/161,739
FILING DATE: 03-DEC-1993
APPLICATION NUMBER: US 08/155,301
FILING DATE: 18-NOV-1993
APPLICATION NUMBER: US 08/096,762
FILING DATE: 22-JUL-1993
APPLICATION NUMBER: US 08/053,131
FILING DATE: 26-APR-1993
APPLICATION NUMBER: US 07/990,860
FILING DATE: 16-DEC-1992

ATTORNEY/AGENT INFORMATION:

NAME: Serafini, Andrew T.
REGISTRATION NUMBER: 41,303
REFERENCE/DOCKET NUMBER: 014643-009030US

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300

INFORMATION FOR SEQ ID NO: 268:

SEQUENCE CHARACTERISTICS:

LENGTH: 4926 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear

MOLECULE TYPE: DNA

; SEQUENCE DESCRIPTION: SEQ ID NO: 268:
US-08-758-417A-268

Query Match 95.2%; Score 383.8; DB 3; Length 4926;
Best Local Similarity 97.0%; Pred. No. 3e-110;
Matches 391; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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Qy    121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
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Qy    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Db    328 CTGAGCTCTGTGACCGCTGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 387

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RESULT 9

US-09-203-768A-1

; Sequence 1, Application US/09203768A

; Patent No. 6787638

; GENERAL INFORMATION:

; APPLICANT: Huse, William D.

; APPLICANT: Watkins, Jeffry D.

; TITLE OF INVENTION: Tumor Specific Human Monoclonal Antibodies and Methods

; TITLE OF INVENTION: of Use

; FILE REFERENCE: P-IX 2947

; CURRENT APPLICATION NUMBER: US/09/203,768A

; CURRENT FILING DATE: 1998-12-02

; NUMBER OF SEQ ID NOS: 8

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 1

; LENGTH: 417

; TYPE: DNA

; ORGANISM: Homo sapiens

; FEATURE:

; NAME/KEY: CDS

; LOCATION: (1)..(417)

; NAME/KEY: sig_peptide
; LOCATION: (1)..(57)
US-09-203-768A-1

Query Match 88.8%; Score 357.8; DB 4; Length 417;
Best Local Similarity 93.5%; Pred. No. 1.5e-102;
Matches 390; Conservative 0; Mismatches 12; Indels 15; Gaps 1;

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Db      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy    121 TCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Db    121 TCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
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Db    181 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240

Qy    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db    241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT----- 353
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Db    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGAAATAGCAGCT 360

Qy    354 -----TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
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RESULT 10

US-09-042-353-351

; Sequence 351, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/042,353
FILING DATE: 13-MAR-1998
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/810,279
FILING DATE: 17-DEC-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/853,408
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/904,068
FILING DATE: 23-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/990,860
FILING DATE: 16-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/053,131
FILING DATE: 26-APR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/096,762
FILING DATE: 22-JUL-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/155,301
FILING DATE: 18-NOV-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/161,739
FILING DATE: 03-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/165,699
FILING DATE: 10-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/209,741
FILING DATE: 09-MAR-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/352,322
FILING DATE: 07-DEC-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/544,404
FILING DATE: 10-OCT-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/728,463
FILING DATE: 10-OCT-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US96/16433
FILING DATE: 10-OCT-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/758,417
FILING DATE: 02-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US97/21803
FILING DATE: 01-DEC-1997
ATTORNEY/AGENT INFORMATION:
NAME: Apple, Randolph T.
REGISTRATION NUMBER: 36,429

```

; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 351:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 413 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-351

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Query Match          83.3%; Score 335.6; DB 3; Length 413;
Best Local Similarity 91.8%; Pred. No. 1.4e-95;
Matches 369; Conservative 0; Mismatches 24; Indels 9; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
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Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      72 GTGCAGCTTCATCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131

Qy      121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db      132 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTTCTGGAGCTGGATCCGCCAGCCCCCA 191

Qy      181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      |||
Db      192 GGGAGGGGCTGGAGTGGATTGGGGAAATCCATCATCGTGAAGCACCAACTACAACCCG 251

Qy      241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Qy      301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAAT--- 357
      |||
Db      312 CTGAGTTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGACATTACTATG 371

Qy      358 -----TGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
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Db      372 GTTCGGGGAGTACCTCACTGGGGCCAGGGAACCCTGGTCACC 413

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RESULT 11

US-08-758-417A-199

; Sequence 199, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94111-3834

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/758,417A
FILING DATE: 02-Dec-1996
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/728,463
FILING DATE: 10-OCT-1996
APPLICATION NUMBER: US 08/544,404
FILING DATE: 10-OCT-1995
APPLICATION NUMBER: US 08/352,322
FILING DATE: 07-DEC-1994
APPLICATION NUMBER: US 08/209,741
FILING DATE: 09-MAR-1994
APPLICATION NUMBER: US 08/165,699
FILING DATE: 10-DEC-1993
APPLICATION NUMBER: US 08/161,739
FILING DATE: 03-DEC-1993
APPLICATION NUMBER: US 08/155,301
FILING DATE: 18-NOV-1993
APPLICATION NUMBER: US 08/096,762
FILING DATE: 22-JUL-1993
APPLICATION NUMBER: US 08/053,131
FILING DATE: 26-APR-1993
APPLICATION NUMBER: US 07/990,860
FILING DATE: 16-DEC-1992

ATTORNEY/AGENT INFORMATION:

NAME: Serafini, Andrew T.
REGISTRATION NUMBER: 41,303
REFERENCE/DOCKET NUMBER: 014643-009030US

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300

INFORMATION FOR SEQ ID NO: 199:

SEQUENCE CHARACTERISTICS:

LENGTH: 413 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear

MOLECULE TYPE: DNA

SEQUENCE DESCRIPTION: SEQ ID NO: 199:

US-08-758-417A-199

Query Match 83.3%; Score 335.6; DB 3; Length 413;
Best Local Similarity 91.8%; Pred. No. 1.4e-95;
Matches 369; Conservative 0; Mismatches 24; Indels 9; Gaps 1;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
 |||
 Db 12 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 71
 Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
 |||
 Db 72 GTGCAGCTTCATCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 131
 Qy 121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
 |||
 Db 132 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTTCTGGAGCTGGATCCGCCAGCCCCCA 191
 Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
 |||
 Db 192 GGGAGGGGGCTGGAGTGGATTGGGGAAATCCATCATCGTGAAGCACCAACTACAACCCG 251
 Qy 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
 |||
 Db 252 TCCCTCGAGAGTCGAGTCACCTATCAGTAGACACGTCCAAAACCAGTTCTCCCTGAGG 311
 Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAAT--- 357
 |||
 Db 312 CTGAGTTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGACATTACTATG 371
 Qy 358 -----TGGTTCGACCCCTGGGGCCAGGGAACCCCTGGTCACC 393
 |||
 Db 372 GTTCGGGGAGTACCTCACTGGGGCCAGGGAACCCCTGGTCACC 413

RESULT 12

US-09-372-425A-7

; Sequence 7, Application US/09372425A

; Patent No. 6475749

; GENERAL INFORMATION:

; APPLICANT: Sherie L. Morrison

; APPLICANT: Ramon Montano

; TITLE OF INVENTION: Improved Rh Antibody

; NUMBER OF SEQUENCES: 11

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Oppenheimer Wolff & Donnelly LLP

; STREET: 2029 Century Park East, Suite 3800

; CITY: Los Angeles

; STATE: CA

; COUNTRY: USA

; ZIP: 90067

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy Disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: Windows 98

; SOFTWARE: MS Word

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/372,425A

; FILING DATE: August 11, 1999

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER:

; FILING DATE:

; ATTORNEY/AGENT INFORMATION:
 ; NAME: Oldenakmp, David J.
 ; REGISTRATION NUMBER: 29,421
 ; REFERENCE/DOCKET NUMBER: 510015-223
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (310) 788-5000
 ; TELEFAX: (310) 788-5100
 ; INFORMATION FOR SEQ ID NO: 7:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 1341 nucleotides
 ; TYPE: nucleotide
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: Heavy chains with tailpiece - DNA
 ; MOLECULE TYPE: (without introns)
 US-09-372-425A-7

Query Match 82.4%; Score 332; DB 4; Length 1341;
 Best Local Similarity 97.1%; Pred. No. 3e-94;
 Matches 338; Conservative 0; Mismatches 10; Indels 0; Gaps 0;

Qy	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG	60
Db	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG	60
Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Qy	121	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	121	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTCACCACTGGAGTTGGATCCGCCAGCCCCCA	180
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG	240
Db	181	GGGAAGGGGCTGGAGTGGATTGGAGAAATCGATCATAGTGGGAAGCACCAATTACAACCCG	240
Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	241	TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCGTGAAG	300
Qy	301	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA	348
Db	301	CTGACCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA	348

RESULT 13

US-09-372-425A-1

; Sequence 1, Application US/09372425A

; Patent No. 6475749

; GENERAL INFORMATION:

; APPLICANT: Sherie L. Morrison

; APPLICANT: Ramon Montano

; TITLE OF INVENTION: Improved Rh Antibody

; NUMBER OF SEQUENCES: 11

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Oppenheimer Wolff & Donnelly LLP

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; STREET: 2029 Century Park East, Suite 3800
; CITY: Los Angeles
; STATE: CA
; COUNTRY: USA
; ZIP: 90067
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy Disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: Windows 98
; SOFTWARE: MS Word
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/372,425A
; FILING DATE: August 11, 1999
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Oldenakmp, David J.
; REGISTRATION NUMBER: 29,421
; REFERENCE/DOCKET NUMBER: 510015-223
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (310) 788-5000
; TELEFAX: (310) 788-5100
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2674 nucleotides
; TYPE: nucleotide
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: Heavy chain with Tailpiece - DNA
; MOLECULE TYPE: (with introns)
US-09-372-425A-1

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Query Match          82.4%; Score 332; DB 4; Length 2674;
Best Local Similarity 97.1%; Pred. No. 4e-94;
Matches 338; Conservative 0; Mismatches 10; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
        |||
Db     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy    121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
        |||
Db    121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTCACCACTGGAGTTGGATCCGCCAGCCCCCA 180

Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
        |||
Db    181 GGAAGGGGCTGGAGTGGATTGGAGAAATCGATCATAGTGAAGCACCAATTACAACCCG 240

Qy    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
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Db    241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

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Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348
|||||
Db 301 CTGACCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348

RESULT 14

US-08-259-372A-5

; Sequence 5, Application US/08259372A

; Patent No. 5565354

; GENERAL INFORMATION:

; APPLICANT: Ostberg, Lars G.

; TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL

; TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN

; NUMBER OF SEQUENCES: 16

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: CA

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/259,372A

; FILING DATE: 14-JUN-1994

; CLASSIFICATION: 424

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/871,426

; FILING DATE: 21-APR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/676,036

; FILING DATE: 27-MAR-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/538,796

; FILING DATE: 15-JUN-1990

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/192,754

; FILING DATE: 11-MAY-1988

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 06/925,196

; FILING DATE: 31-OCT-1986

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 06/904,517

; FILING DATE: 05-SEP-1986

; ATTORNEY/AGENT INFORMATION:

; NAME: Smith, William M.

; REGISTRATION NUMBER: 30,223

; REFERENCE/DOCKET NUMBER: 11823-50-7

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (415) 326-2400

; TELEFAX: (415) 576-0300

; INFORMATION FOR SEQ ID NO: 5:

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; SEQUENCE CHARACTERISTICS:
;   LENGTH: 402 base pairs
;   TYPE: nucleic acid
;   STRANDEDNESS: unknown
;   TOPOLOGY: unknown
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
;   ORGANISM: Homo sapiens
;   CELL TYPE: Hybridoma
;   CELL LINE: ZM1-2
; FEATURE:
;   NAME/KEY: CDS
;   LOCATION: 1..402
US-08-259-372A-5

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Query Match          75.5%; Score 304.4; DB 1; Length 402;
Best Local Similarity 84.8%; Pred. No. 8e-86;
Matches 341; Conservative 0; Mismatches 61; Indels 0; Gaps 0;

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Db      1 ATGAAACACCTGTGGTTCTTCCTCCTGTGGTGGCAGTTCCCAGATGGGTCTGTCCCAG 60

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Qy      121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCA 180
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Db      121 TGCCTGTCTCCCGTGGCTCTTCAGTGATTACTTCTGGAATTGGTTCCGGCAGCCCGCC 180

Qy      181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 240
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Qy      301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
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Db      301 CTGAGCTCTGTGACCGTCGCGGACACGGCCGTGTATTATTGTGCGAGAGGACTGTCCGGT 360

Qy      361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
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Db      361 TTTGACTACTGGGGCCAGGAGCCCTGGTCACCGTCTCCCCA 402

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RESULT 15

US-08-468-671-5

; Sequence 5, Application US/08468671

; Patent No. 5648077

; GENERAL INFORMATION:

; APPLICANT: Ostberg, Lars G.

; TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL

;
; TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
; NUMBER OF SEQUENCES: 16
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: CA
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/468,671
; FILING DATE: 06-JUN-1995
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/259,372
; FILING DATE: 14-JUN-1994
; APPLICATION NUMBER: US 07/871,426
; FILING DATE: 21-APR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/676,036
; FILING DATE: 27-MAR-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/538,796
; FILING DATE: 15-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/192,754
; FILING DATE: 11-MAY-1988
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 06/925,196
; FILING DATE: 31-OCT-1986
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 06/904,517
; FILING DATE: 05-SEP-1986
; ATTORNEY/AGENT INFORMATION:
; NAME: Smith, William M.
; REGISTRATION NUMBER: 30,223
; REFERENCE/DOCKET NUMBER: 11823-50-7
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 326-2400
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 402 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: unknown
; TOPOLOGY: unknown
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; CELL TYPE: Hybridoma

; CELL LINE: ZM1-2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..402
US-08-468-671-5

Query Match 75.5%; Score 304.4; DB 1; Length 402;
Best Local Similarity 84.8%; Pred. No. 8e-86;
Matches 341; Conservative 0; Mismatches 61; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
      |||
Db      1 ATGAAACACCTGTGGTTCTTCCTCCTGCTGGTGGCAGTTCCCAGATGGGTCTGTGTCCCAG 60

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db     61 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGGCTGCGGAGACCCTGTCCCTCACC 120

Qy    121 TCGCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
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Db    121 TGCAGTGTCTCCCGTGGCTCCTTCAGTGATTACTTCTGGAATTGGTTCGGGCAGCCCGCC 180

Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
      |||
Db    181 GGGAGCGCCTGGAGTGGCTTGGGCGTGTCTATACAGTGGAAGTGTGCGACTACAACCCC 240

Qy    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db    241 TCCCTCAAGAGTCGAGTCACCGTGTCTAGTGGACACGTCCAAGAAGCAGTTCTCCCTGAGG 300

Qy    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
      |||
Db    301 CTGAGCTCTGTGACCGTCGCGGACACGGCCGTGTATTATTGTGCGAGAGGACTGTCCGGT 360

Qy    361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
      |||
Db    361 TTTGACTACTGGGGCCAGGAGCCCTGGTCACCGTCTCCCCA 402
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Search completed: December 2, 2004, 17:07:34
Job time : 59.86 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 17:01:26 ; Search time 308.977 Seconds
(without alignments)
7166.911 Million cell updates/sec

Title: US-08-728-463B-205
Perfect score: 403
Sequence: 1 ATGAAACACCTGTGGTTCTT.....CCTGGTCACCGTCTCCTCAG 403

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 3694831 seqs, 2747406616 residues

Total number of hits satisfying chosen parameters: 7389662

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published_Applications_NA:*

- 1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
- 2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
- 3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
- 4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
- 5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
- 6: /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
- 7: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
- 8: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
- 9: /cgn2_6/ptodata/1/pubpna/US09A_PUBCOMB.seq:*
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- 11: /cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
- 12: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
- 13: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
- 14: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
- 15: /cgn2_6/ptodata/1/pubpna/US10C_PUBCOMB.seq:*
- 16: /cgn2_6/ptodata/1/pubpna/US10D_PUBCOMB.seq:*
- 17: /cgn2_6/ptodata/1/pubpna/US10E_PUBCOMB.seq:*
- 18: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
- 19: /cgn2_6/ptodata/1/pubpna/US11_NEW_PUB.seq:*
- 20: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
- 21: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		%					Description
Result	Query	Match	Length	DB	ID		
No.	Score						
	1	357.8	88.8	417	15	US-10-300-675-1	Sequence 1, Appli
	2	332	82.4	1341	15	US-10-194-801C-7	Sequence 7, Appli
	3	332	82.4	2674	15	US-10-194-801C-1	Sequence 1, Appli
	4	326	80.9	1990	17	US-10-684-109-104	Sequence 104, App
c	5	326	80.9	1990	17	US-10-684-109-105	Sequence 105, App
	6	323.6	80.3	481	17	US-10-693-629-43	Sequence 43, Appl
	7	322.8	80.1	1990	17	US-10-684-109-69	Sequence 69, Appl
c	8	322.8	80.1	1990	17	US-10-684-109-70	Sequence 70, Appl
	9	319.8	79.4	426	16	US-10-399-518-94	Sequence 94, Appl
	10	319.8	79.4	792	16	US-10-399-518-110	Sequence 110, App
	11	319.8	79.4	822	16	US-10-399-518-113	Sequence 113, App
	12	319	79.2	1401	15	US-10-292-088-85	Sequence 85, Appl

	13	316.4	78.5	1990	17	US-10-684-109-86	Sequence 86, Appl
c	14	316.4	78.5	1990	17	US-10-684-109-87	Sequence 87, Appl
	15	315.8	78.4	1401	15	US-10-292-088-69	Sequence 69, Appl
	16	311.6	77.3	1990	17	US-10-684-109-98	Sequence 98, Appl
c	17	311.6	77.3	1990	17	US-10-684-109-99	Sequence 99, Appl
	18	311	77.2	411	16	US-10-309-762-114	Sequence 114, App
	19	310.6	77.1	423	16	US-10-309-762-104	Sequence 104, App
	20	309	76.7	629	16	US-10-264-049-2156	Sequence 2156, Ap
	21	308.4	76.5	467	18	US-10-478-056-16	Sequence 16, Appl
	22	307.4	76.3	1395	15	US-10-292-088-21	Sequence 21, Appl
	23	306.4	76.0	414	15	US-10-309-764-110	Sequence 110, App
	24	306.2	76.0	1401	15	US-10-292-088-29	Sequence 29, Appl
	25	305.8	75.9	423	16	US-10-309-762-108	Sequence 108, App
	26	305.4	75.8	429	16	US-10-309-762-110	Sequence 110, App
	27	304.2	75.5	462	17	US-10-693-629-47	Sequence 47, Appl
	28	303.6	75.3	467	18	US-10-478-056-20	Sequence 20, Appl
	29	301.6	74.8	505	9	US-09-954-456-1183	Sequence 1183, Ap
	30	301.6	74.8	200000	17	US-10-672-764A-32	Sequence 32, Appl
	31	301	74.7	423	16	US-10-309-762-106	Sequence 106, App
	32	300	74.4	348	16	US-10-338-366-5	Sequence 5, Appli
	33	300	74.4	414	15	US-10-309-764-106	Sequence 106, App
	34	299.8	74.4	353	9	US-09-864-761-28159	Sequence 28159, A
	35	299	74.2	413	10	US-09-918-995-16699	Sequence 16699, A
	36	298.4	74.0	414	15	US-10-309-764-114	Sequence 114, App
	37	297.8	73.9	356	16	US-10-388-214A-35	Sequence 35, Appl
	38	294	73.0	1996	17	US-10-684-109-92	Sequence 92, Appl
c	39	294	73.0	1996	17	US-10-684-109-93	Sequence 93, Appl
	40	293.2	72.8	354	15	US-10-371-942-89	Sequence 89, Appl
	41	293	72.7	336	16	US-10-338-366-9	Sequence 9, Appli
	42	292	72.5	669	10	US-09-972-656-65	Sequence 65, Appl
	43	290.4	72.1	356	16	US-10-388-214A-37	Sequence 37, Appl
	44	289.8	71.9	375	15	US-10-371-942-109	Sequence 109, App
	45	289.6	71.9	432	15	US-10-389-221-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1

US-10-300-675-1

```
; Sequence 1, Application US/10300675
; Publication No. US20030198638A1
; GENERAL INFORMATION:
; APPLICANT: Watkins, Jeffry D.
; TITLE OF INVENTION: Tumor Specific Monoclonal Antibodies
; FILE REFERENCE: P-IX 5519
; CURRENT APPLICATION NUMBER: US/10/300,675
; CURRENT FILING DATE: 2002-11-19
; PRIOR APPLICATION NUMBER: US 09/989,901
; PRIOR FILING DATE: 2001-11-19
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 417
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
```


; NAME/KEY: CDS
; LOCATION: (1)...(417)
US-10-300-675-1

Query Match 88.8%; Score 357.8; DB 15; Length 417;
Best Local Similarity 93.5%; Pred. No. 1.2e-102;
Matches 390; Conservative 0; Mismatches 12; Indels 15; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
        |||
Db      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
        |||
Db     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy    121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
        |||
Db    121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
        ||
Db    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240

Qy    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
        |||
Db    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300

Qy    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT----- 353
        |||
Db    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGAAATAGCAGCT 360

Qy    354 -----TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
        ||
Db    361 CGTCCTCACCAGATACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 417
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RESULT 2

US-10-194-801C-7

; Sequence 7, Application US/10194801C
; Publication No. US20030143643A1

GENERAL INFORMATION:

; APPLICANT: Sherie L. Morrison
; Ramon Montano

; TITLE OF INVENTION: Rh Antibody

; NUMBER OF SEQUENCES: 11

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Shapiro & Dupont LLP

; STREET: 233 Wilshire Boulevard, Suite 700

; CITY: Santa Monica

; STATE: CA

; COUNTRY: USA

; ZIP: 90067

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy Disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: Windows 2000

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;      SOFTWARE: MS Word
;
;      CURRENT APPLICATION DATA:
;      APPLICATION NUMBER: US/10/194,801C
;      FILING DATE: 11-Mar-2003
;      CLASSIFICATION: <Unknown>
;
;      PRIOR APPLICATION DATA:
;      APPLICATION NUMBER: 09/372,425
;      FILING DATE: August 11, 1999
;
;      ATTORNEY/AGENT INFORMATION:
;      NAME: Oldenkamp, David J.
;      REGISTRATION NUMBER: 29,421
;      REFERENCE/DOCKET NUMBER: 0180.0033
;
;      TELECOMMUNICATION INFORMATION:
;      TELEPHONE: (310) 319-5411
;      TELEFAX: (310) 319-5401
;
;      INFORMATION FOR SEQ ID NO: 7:
;      SEQUENCE CHARACTERISTICS:
;      LENGTH: 1341 nucleotides
;      TYPE: nucleotide
;      STRANDEDNESS: single
;      TOPOLOGY: linear
;
;      MOLECULE TYPE: Heavy chains with tailpiece - DNA
;                      (without introns)
;
;      SEQUENCE DESCRIPTION: SEQ ID NO: 7
US-10-194-801C-7

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Query Match          82.4%;  Score 332;  DB 15;  Length 1341;
Best Local Similarity 97.1%;  Pred. No. 2.1e-94;
Matches 338;  Conservative 0;  Mismatches 10;  Indels 0;  Gaps 0;

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Qy      1  ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1  ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy     61  GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61  GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy    121  TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121  TGCGCTGTCTATGGTGGGTCCTTCAGTGGTCACCACTGGAGTTGGATCCGCCAGCCCCCA 180

Qy    181  GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      || ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181  GGGAAGGGGCTGGAGTGGATTGGAGAAATCGATCATAGTGAAGCACCAATTACAACCCG 240

Qy    241  TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241  TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCGTGAAG 300

Qy    301  CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348
      |||| ||||||||||||||||||||||||||||||||||||||||||
Db    301  CTGACCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348

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RESULT 3
US-10-194-801C-1

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; Sequence 1, Application US/10194801C
; Publication No. US20030143643A1
; GENERAL INFORMATION:
;   APPLICANT: Sherie L. Morrison
;             Ramon Montano
;   TITLE OF INVENTION: Rh Antibody
;   NUMBER OF SEQUENCES: 11
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE: Shapiro & Dupont LLP
;     STREET: 233 Wilshire Boulevard, Suite 700
;     CITY: Santa Monica
;     STATE: CA
;     COUNTRY: USA
;     ZIP: 90067
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE: Floppy Disk
;     COMPUTER: IBM PC compatible
;     OPERATING SYSTEM: Windows 2000
;     SOFTWARE: MS Word
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER: US/10/194,801C
;     FILING DATE: 11-Mar-2003
;     CLASSIFICATION: <Unknown>
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER: 09/372,425
;     FILING DATE: August 11, 1999
;   ATTORNEY/AGENT INFORMATION:
;     NAME: Oldenkamp, David J.
;     REGISTRATION NUMBER: 29,421
;     REFERENCE/DOCKET NUMBER: 0180.0033
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE: (310) 319-5411
;     TELEFAX: (310) 319-5401
;   INFORMATION FOR SEQ ID NO: 1:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH: 2674 nucleotides
;       TYPE: nucleotide
;       STRANDEDNESS: single
;       TOPOLOGY: linear
;     MOLECULE TYPE: Heavy chain with Tailpiece - DNA
;                   (with introns)
;     SEQUENCE DESCRIPTION: SEQ ID NO: 1
US-10-194-801C-1

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Query Match          82.4%;  Score 332;  DB 15;  Length 2674;
Best Local Similarity 97.1%;  Pred. No. 2.5e-94;
Matches 338;  Conservative 0;  Mismatches 10;  Indels 0;  Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

Qy    121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180

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      |||
Db      121 TGC GCTG TCTATGGTGGGTCCTTCAGTGGTGACCACTGGAGTTGGATCCGCCAGCCCCCA 180
      |||
Qy      181 GGTAAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 240
      |||
Db      181 GGGAAAGGGGCTGGAGTGGATTGGAGAAATCGATCATAGTGGGAAGCACCAATTACAACCCG 240
      |||
Qy      241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db      241 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCGTGAAG 300
      |||
Qy      301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348
      |||
Db      301 CTGACCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA 348

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RESULT 4

US-10-684-109-104

; Sequence 104, Application US/10684109

; Publication No. US20040175379A1

; GENERAL INFORMATION:

; APPLICANT: DeVries, Peter J.

; APPLICANT: Green, Larry L.

; APPLICANT: Ostrow, David H.

; APPLICANT: Reilly, Edward B.

; APPLICANT: Wieler, James

; TITLE OF INVENTION: Erythropoietin Receptor Binding

; TITLE OF INVENTION: Antibodies

; FILE REFERENCE: 6989.US.02

; CURRENT APPLICATION NUMBER: US/10/684,109

; CURRENT FILING DATE: 2003-10-10

; PRIOR APPLICATION NUMBER: 10/269,711

; PRIOR FILING DATE: 2002-10-14

; NUMEER OF SEQ ID NOS: 115

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 104

; LENGTH: 1990

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-684-109-104

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Query Match          80.9%;  Score 326;  DB 17;  Length 1990;
Best Local Similarity 89.4%;  Pred. No. 1.8e-92;
Matches 363;  Conservative 0;  Mismatches 40;  Indels 3;  Gaps 1;

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```

Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
      |||
Db      1 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
      |||
Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db     61 GTGCAGCTGCAGGAGTCGGGCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Qy    121 TGC GCTG TCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db    121 TGC ACTGTCTCTGGTGGCTCCATCAGTCGTTACTACTGGAGCTGGATCCGGCAGCCCCCA 180

```



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Db      52 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 111
Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
        ||||| ||| ||| ||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     112 GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 171
Qy     121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
        ||| ||||| ||||| ||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     172 TGCCTGTCTCTGGTGGCTCCATCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 231
Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 240
        || ||||| ||||| ||||| ||| ||| ||| ||||| ||||| ||||| |||||
Db     232 GGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAATCCC 291
Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     292 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 351
Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA----- 348
        |||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     352 CTGAATTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGCCCCCTTGCAC 411
Qy     349 ---GTAATTAATTGGTTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
        | ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     412 GGTGACTACAAATGGTTCCACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 469

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RESULT 7

US-10-684-109-69

; Sequence 69, Application US/10684109

; Publication No. US20040175379A1

; GENERAL INFORMATION:

; APPLICANT: DeVries, Peter J.

; APPLICANT: Green, Larry L.

; APPLICANT: Ostrow, David H.

; APPLICANT: Reilly, Edward B.

; APPLICANT: Wieler, James

; TITLE OF INVENTION: Erythropoietin Receptor Binding

; TITLE OF INVENTION: Antibodies

; FILE REFERENCE: 6989.US.02

; CURRENT APPLICATION NUMBER: US/10/684,109

; CURRENT FILING DATE: 2003-10-10

; PRIOR APPLICATION NUMBER: 10/269,711

; PRIOR FILING DATE: 2002-10-14

; NUMBER OF SEQ ID NOS: 115

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 69

; LENGTH: 1990

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-684-109-69

Query Match 80.1%; Score 322.8; DB 17; Length 1990;

Best Local Similarity 88.9%; Pred. No. 1.8e-91;

Matches 361; Conservative 0; Mismatches 42; Indels 3; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

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Qy	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTTGTCCTCCAG	60
Db	1990	ATGAAGCATCTGTGGTTCTTCCTTCTCCTAGTGGCAGCTCCCAGATGGGTCTTGTCCTCCAG	1931
Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	1930	GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC	1871
Qy	121	TGCGCTGTCTATGGTGGGTCTTCACTAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	1870	TGCACTGTCTCTGGTGCCTCCATCAGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCA	1811
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG	240
Db	1810	GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC	1751
Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	1750	TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG	1691
Qy	301	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	360
Db	1690	CTGAGGTCTGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGAGCGACTGGGG	1631
Qy	361	TTC---GACCCCTGGGGCCAGGGAACCCCTGGTCACCGTCTCCTCAG	403
Db	1630	ATCGGGGACTACTGGGGCCAAGGAACCCCTGGTCACCGTCTCCTCAG	1585

RESULT 9

US-10-399-518-94

; Sequence 94, Application US/10399518

; Publication No. US20040091475A1

; GENERAL INFORMATION:

; APPLICANT: TSUCHIYA, MASAYUKI

; APPLICANT: OHTOMO, TOSHIHIKO

; APPLICANT: YABUTA, NAOHIRO

; APPLICANT: TSUNODA, HIROYUKI

APPLICANT: ORITA, TETSURO

TITLE OF INVENTION: DEGRADED TPO AGONIST ANTIBODY

; FILE REFERENCE: 065678/0111

; CURRENT APPLICATION NUMBER: US/10/399,518

; CURRENT FILING DATE: 2003-09-25

; PRIOR APPLICATION NUMBER: PCT/JP01/03288

PRIOR FILING DATE: 2001-04-17

; PRIOR APPLICATION NUMBER: JP 2001-277314

; PRIOR FILING DATE: 2001-09-12

; PRIOR APPLICATION NUMBER: JP 2000-321821

PRIOR FILING DATE: 2000-10-20

; NUMBER OF SEQ ID NOS: 183

SOFTWARE: PatentIn Ver. 2.1

; SEO ID NO 94

LENGTH: 426

; TYPE: DNA

; ORGANISM: Mus sp.

; FEATURE:

; NAME/KEY: CDS

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; LOCATION: (12)..(410)
; OTHER INFORMATION: 12E10H, H chain V region
US-10-399-518-94

```

Query Match 79.4%; Score 319.8; DB 16; Length 426;
Best Local Similarity 88.8%; Pred. No. 1.2e-90;
Matches 358; Conservative 0; Mismatches 42; Indels 3; Gaps 1;

[illegible]

RESULT 10

US-10-399-518-110

; Sequence 110, Application US/10399518

; Publication No. US20040091475A1

; GENERAL INFORMATION:

; APPLICANT: TSUCHIYA, MASAYUKI

APPLICANT: OHTOMO, TOSHIHIKO

APPLICANT: YABUTA, NAOHIRO

: APPLICANT: TSUNODA, HIROYUKI

; APPLICANT: ORITA, TETSURO

: TITLE OF INVENTION: DEGRADED TPO AGONIST ANTIBODY

: FILE REFERENCE: 065678/0111

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; CURRENT FILING DATE: 2003-09-25

PRIOR APPLICATION NUMBER: PCT/JP01/03288

PRIOR FILING DATE: 2001-04-17

: PRIOR APPLICATION NUMBER: JP 2001-277314

PRIOR FILING DATE: 2001-09-12

; PRIOR APPLICATION NUMBER: JP 2000-321821

; PRIOR FILING DATE: 2000-10-20

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; NUMBER OF SEQ ID NOS: 183
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 110
; LENGTH: 792
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: 12E10, Single chain
Fv
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (11)..(778)
US-10-399-518-110

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Query Match          79.4%; Score 319.8; DB 16; Length 792;
Best Local Similarity 88.8%; Pred. No. 1.3e-90;
Matches 358; Conservative 0; Mismatches 42; Indels 3; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
        |||
Db      11 ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 70
        |||

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
        |||
Db      71 GTGCAGCTGCAGCAGTCGGGCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC 130
        |||

Qy     121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
        |||
Db     131 TGCAGTGTCTCTGGTGACTCCATCAGTAGTTACTACTGGAGCTGGATTCGGCAGCCCCCA 190
        |||

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
        |||
Db     191 GGAAGGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC 250
        |||

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
        |||
Db     251 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAGCCAGTTCTCCCTGAAG 310
        |||

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
        |||
Db     311 CTGAGCTCTGTGACCGCCGCGAGACACGGCCGTGTATTACTGTGCGAGAG---GGCGGTAC 367
        |||

Qy     361 TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
        |||
Db     368 TTCGATGTCTGGGGCCGTGGCACCATGGTCACTGTCTCCTCAG 410
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RESULT 11

US-10-399-518-113

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; Sequence 113, Application US/10399518
; Publication No. US20040091475A1
; GENERAL INFORMATION:
; APPLICANT: TSUCHIYA, MASAYUKI
; APPLICANT: OHTOMO, TOSHIHIKO
; APPLICANT: YABUTA, NAOHIRO
; APPLICANT: TSUNODA, HIROYUKI
; APPLICANT: ORITA, TETSURO

```


US-10-292-088-85

US-10-292-088-85

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[illegible]

RESULT 14

US-10-684-109-87/c

; Sequence 87, Application US/10684109

; Publication No. US20040175379A1

; GENERAL INFORMATION:

APPLICANT: DeVries, Peter J.

APPLICANT: Green, Larry L.

; APPLICANT: Ostrow, David H.

; APPLICANT: Reilly, Edward B.

; APPLICANT: Wieler, James

; TITLE OF INVENTION: Erythropoietin Receptor Binding

; TITLE OF INVENTION: Antibodies

FILE REFERENCE: 6989.US.02

; CURRENT APPLICATION NUMBER: US/10/684,109

; CURRENT FILING DATE: 2003-10-10

; PRIOR APPLICATION NUMBER: 10/269,711

; PRIOR FILING DATE: 2002-10-14

NUMBER OF SEQ ID NOS: 115

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 37

; LENGTH: 1990

TYPE: DNA

ORGANISM: Homo sapiens

US-10-684-109-87

Query Match 78.5%; Score 316.4; DB 17; Length 1990;

Best Local Similarity 87.9%; Pred. No. 1.9e-89;

Matches 357; Conservative 0; Mismatches 46; Indels 3; Gaps 1;

[illegible]

Qy 361 TT---CGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
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Db 1630 ATTGGAGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 1585

RESULT 15

US-10-292-088-69
; Sequence 69, Application US/10292088
; Publication No. US20030211100A1
; GENERAL INFORMATION:
; APPLICANT: BEDIAN, VAHE
; APPLICANT: GLADUE, RONALD P.
; APPLICANT: CORVALAN, JOSE
; APPLICANT: JIA, XIAO-CHI
; APPLICANT: FENG, XIAO
; TITLE OF INVENTION: ANTIBODIES TO CD40
; FILE REFERENCE: ABX-PF/3 US
; CURRENT APPLICATION NUMBER: US/10/292,088
; CURRENT FILING DATE: 2003-03-14
; PRIOR APPLICATION NUMBER: 60/348,980
; PRIOR FILING DATE: 2001-11-09
; NUMBER OF SEQ ID NOS: 147
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 69
; LENGTH: 1401
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-292-088-69

Query Match 78.4%; Score 315.8; DB 15; Length 1401;
Best Local Similarity 86.9%; Pred. No. 2.8e-89;
Matches 366; Conservative 0; Mismatches 37; Indels 18; Gaps 1;

Qy	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG	60
Db	1	ATGAAACATCTGTGGTTCTTCCTTCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG	60
Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	61	GTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Qy	121	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	121	TGCACTGTCTCTGGTGGCTCCATCAGAGGTTACTACTGGAGCTGGATCCGCCAGCCCCCT	180
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG	240
Db	181	GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCAACTACAACCCC	240
Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	241	TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Qy	301	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA-----	348
Db	301	CTGAACCTCTGTGACCGCTGCGGACACGGCCGTGTATTATTGTGCGAGAAAGGGGGCCCTC	360

Search completed: December 3, 2004, 02:43:17
Job time : 309.977 secs

OM nucleic - nucleic search, using sw model

Title: US-08-728-463B-205
Perfect score: 403
Sequence: 1 ATGAAACACCTGTGGTTCTT.....CCTGGTCACCGTCTCCTCAG 403

Searched: 32822875 seqs, 18219865908 residues

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Minimum DE seq length: 0
Maximum DB seq length: 2000000000
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Database : EST:*
1: gb_est1:*
2: gb_est2:*
3: gb_htc:*
4: gb_est3:*
5: gb_est4:*
6: gb_est5:*
7: gb_est6:*
8: gb_gss1:*
9: gb_gss2:*
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SUMMARIES

Result No.	%		Query		DB	ID	Description
	Score	Match	Length				
1	366.8	91.0	798	4	BI771905	BI771905	603058919
2	362.2	89.9	1097	2	BF974768	BF974768	602245417
3	359	89.1	980	5	BQ705925	BQ705925	AGENCOURT
4	356.6	88.5	980	5	BQ706553	BQ706553	AGENCOURT
5	348.8	86.6	931	5	BQ878887	BQ878887	AGENCOURT
6	348.6	86.5	721	4	BG686995	BG686995	602650991
7	348.6	86.5	937	2	BF663511	BF663511	602144676
8	345.8	85.8	834	4	BG758193	BG758193	602712365
9	345.2	85.7	931	5	BQ707803	BQ707803	AGENCOURT
10	345	85.6	570	4	BG684621	BG684621	602636395
11	345	85.6	894	4	BG757611	BG757611	602714787
12	344.2	85.4	632	4	BG341565	BG341565	602463671
13	344	85.4	701	2	BE560828	BE560828	601346293
14	342.4	85.0	493	2	BE513635	BE513635	601316029
15	342.4	85.0	494	2	AW732723	AW732723	bb12b11.y
16	342.4	85.0	505	4	BM051752	BM051752	603638570
17	342.4	85.0	532	2	BE268243	BE268243	601125674
18	342.4	85.0	566	2	BE297872	BE297872	601174405
19	342.4	85.0	610	2	BE268381	BE268381	601125007
20	342.4	85.0	628	2	BE514064	BE514064	601316566
21	342.4	85.0	629	2	BE267595	BE267595	601124386
22	342.4	85.0	630	4	BI226863	BI226863	602951958
23	342.4	85.0	643	2	BE397780	BE397780	601289535
24	342.4	85.0	659	2	BE514250	BE514250	601315751
25	342.4	85.0	676	2	BE513694	BE513694	601315444
26	342.4	85.0	683	2	BE513942	BE513942	601315167
27	342.4	85.0	716	2	BE396528	BE396528	601288939
28	342.4	85.0	725	2	BE513429	BE513429	601315782
29	342.4	85.0	731	2	BE397175	BE397175	601290895
30	342.4	85.0	744	2	BE268552	BE268552	601125344
31	342.4	85.0	749	2	BE514419	BE514419	601315652
32	342.4	85.0	752	2	BE514251	BE514251	601315767
33	342.4	85.0	849	4	BI225669	BI225669	602949043
34	342.4	85.0	866	4	BI225138	BI225138	602949807
35	342.4	85.0	871	4	BM051499	BM051499	603638183
36	342.4	85.0	881	4	BM051703	BM051703	603638494
37	342.4	85.0	958	2	BE561032	BE561032	601344644
38	342.4	85.0	1253	2	BE562381	BE562381	601344926
39	341.4	84.7	566	2	BE559735	BE559735	601347628
40	340.8	84.6	528	2	BE267996	BE267996	601125709
41	340.8	84.6	536	2	BE269628	BE269628	601185024
42	340.8	84.6	539	2	BE397594	BE397594	601289688
43	340.8	84.6	542	2	BE267917	BE267917	601125493
44	340.8	84.6	552	2	BE268248	BE268248	601125687
45	340.8	84.6	579	2	BE269330	BE269330	601185203

ALIGNMENTS

RESULT 1

BI771905

LOCUS

BI771905

798 bp

mRNA

linear

EST 25-SEP-2001

DEFINITION 603058919F1 NIH_MGC_122 Homo sapiens cDNA clone IMAGE:5208197 5', mRNA sequence.
 ACCESSION BI771905
 VERSION BI771905.1 GI:15763483
 KEYWORDS EST.
 SOURCE Homo sapiens (human)
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 REFERENCE 1 (bases 1 to 798)
 AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.
 TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
 JOURNAL Unpublished (1999)
 COMMENT Contact: Robert Strausberg, Ph.D.
 Email: cgapbs-r@mail.nih.gov
 Tissue Procurement: Life Technologies, Inc.
 cDNA Library Preparation: Life Technologies, Inc.
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
 DNA Sequencing by: Incyte Genomics, Inc.
 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: <http://image.llnl.gov>
 Plate: LLAM11522 row: f column: 06
 High quality sequence stop: 794.
 FEATURES Location/Qualifiers
 source 1..798
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /clone="IMAGE:5208197"
 /lab_host="DH10B"
 /clone_lib="NIH_MGC_122"
 /note="Organ: pooled lung and spleen; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed); RNA source anonymous pool of 24 week female lung, 16 week female spleen, and 20-22 week male spleens. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.4 kb, insert size range 1-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 026. Note: this is a NIH_MGC Library."

ORIGIN

Query Match 91.0%; Score 366.8; DB 4; Length 798;
 Best Local Similarity 94.7%; Pred. No. 5.6e-95;
 Matches 396; Conservative 0; Mismatches 7; Indels 15; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
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Db      25 ATGAAACACCTGTGGTTCTTCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 84

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db      145  |||...||| TGC GCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 204
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Db      265  |||...||| TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 324
Qy      301  CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAG----- 349
Db      325  |||...||| CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGGGGGTAACTGG 384
Qy      350  ----TAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
Db      385  |||...||| CCACGATACAACCTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 442

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RESULT 2

BF974768

LOCUS BF974768 1097 bp mRNA linear EST 22-JAN-2001

DEFINITION 602245417F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4336397 5', mRNA sequence.

ACCESSION BF974768

VERSION BF974768.1 GI:12341983

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 1097)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Louis M. Staudt, M.D., Ph.D.

cDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

<http://image.llnl.gov>

Plate: LLCM1209 row: a column: 06

High quality sequence stop: 646.

FEATURES

source

Location/Qualifiers

1..1097

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/clone="IMAGE:4336397"

/tissue_type="primary B-cells from tonsils (cell line)"

/lab_host="DH10B (phage-resistant)"

/clone_lib="NIH_MGC_48"

/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;

Site_2: EcoRI; cDNA made by oligo-dT priming.
 Directionally cloned into EcoRI/XhoI sites using the
 following 5' adaptor: GGCACGAG(G). Size-selected >500bp
 for average insert size 1.8kb. Library constructed by Ling
 Hong in the laboratory of Gerald M. Rubin (University of
 California, Berkeley) using ZAP-cDNA synthesis kit
 (Stratagene) and Superscript II RT. (Life Technologies).
 Note: this is a NIH_MGC Library."

ORIGIN

Query Match 89.9%; Score 362.2; DB 2; Length 1097;
 Best Local Similarity 96.0%; Pred. No. 1.3e-93;
 Matches 383; Conservative 0; Mismatches 13; Indels 3; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
      |||
Db      15 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 74

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      75 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 134

Qy     121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     135 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 194

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      |||
Db     195 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 254

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     255 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 314

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTG- 359
      |||
Db     315 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGCAAGGTCTGGG 374

Qy     360 --GTTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTC 396
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Db     375 CCGGATGACTACTGGGGCCAGGGAACCCTGGTCACCGTC 413
  
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RESULT 3

BQ705925

LOCUS BQ705925 980 bp mRNA linear EST 16-JUL-2002

DEFINITION AGENCOURT_7976138 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6214792
 5', mRNA sequence.

ACCESSION BQ705925

VERSION BQ705925.1 GI:21844824

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 980)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
 JOURNAL Unpublished (1999)
 COMMENT Contact: Robert Strausberg, Ph.D.
 Email: cgapbs-r@mail.nih.gov
 Tissue Procurement: Dr. Mark Watson
 cDNA Library Preparation: Rubin Laboratory
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
 DNA Sequencing by: Agencourt Bioscience Corporation
 Clone distribution: MGC clone distribution information can be
 found through the I.M.A.G.E. Consortium/LLNL at:
<http://image.llnl.gov>
 Plate: LLCM2382 row: k column: 17
 High quality sequence start: 13
 High quality sequence stop: 510.

FEATURES Location/Qualifiers
 source 1..980
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /clone="IMAGE:6214792"
 /lab_host="DH10B (phage-resistant)"
 /clone_lib="NIH_MGC_113"
 /note="Organ: spleen; Vector: pOTB7; Site_1: XhoI; Site_2:
 EcoRI; cDNA made by oligo-dT priming. Directionally cloned
 into EcoRI/XhoI sites using the following 5' adaptor:
 GGCACGAG(G). Library constructed by Ling Hong in the
 laboratory of Gerald M. Rubin (University of California,
 Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and
 Superscript II RT (Life Technologies). Note: this is a
 NIH_MGC Library."

ORIGIN

Query Match 89.1%; Score 359; DB 5; Length 980;
 Best Local Similarity 93.3%; Pred. No. 1e-92;
 Matches 393; Conservative 0; Mismatches 10; Indels 18; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCAGATGGGTCTGTCCCAG 60
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Db      33 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTTCCAGATGGGTCTGTCCCAG 92

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      93 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 152

Qy     121 TGCGCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     153 TGCGCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 212

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      ||
Db     213 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 272

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     273 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 332

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAAT----- 353
  
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      |||
Db      333 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGACGGCTCGCATTA 392
      |||
Qy      354 -----TAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 402
      |||
Db      393 GGACGCTCCGGTGTCTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA 452
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Qy      403 G 403
      |
Db      453 G 453

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RESULT 4

BQ706553

LOCUS BQ706553 980 bp mRNA linear EST 16-JUL-2002
 DEFINITION AGENCOURT_8487920 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6300742
 5', mRNA sequence.

ACCESSION BQ706553

VERSION BQ706553.1 GI:21845452

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 980)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Dr. Mark Watson

cDNA Library Preparation: Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be
 found through the I.M.A.G.E. Consortium/LLNL at:

<http://image.llnl.gov>

Plate: LLCM2515 row: h column: 23

High quality sequence stop: 479.

FEATURES

source

Location/Qualifiers

1. .980

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/clone="IMAGE:6300742"

/lab_host="DH10B (phage-resistant)"

/clone_lib="NIH_MGC_113"

/note="Organ: spleen; Vector: pOTB7; Site_1: XhoI; Site_2:
 EcoRI; cDNA made by oligo-dT priming. Directionally cloned
 into EcoRI/XhoI sites using the following 5' adaptor:
 GGCACGAG(G). Library constructed by Ling Hong in the
 laboratory of Gerald M. Rubin (University of California,
 Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and
 Superscript II RT (Life Technologies). Note: this is a
 NIH_MGC Library."

ORIGIN

Query Match 88.5%; Score 356.6; DB 5; Length 980;
 Best Local Similarity 93.9%; Pred. No. 5.2e-92;
 Matches 384; Conservative 0; Mismatches 19; Indels 6; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
      |||
Db      19 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 78

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      79 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 138

Qy     121 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     139 TGCCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 198

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      |||
Db     199 GGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACGAACACTACAACCCG 258

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     259 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTGTCCCTGAAC 318

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA-----GTAATT 354
      |||
Db     319 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGCGATGTGTCGTTATA 378

Qy     355 AATTGGTTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
      |||
Db     379 GGAAGATCCAGTATTGGGGCCAGGGCACCCCTGGTCACCGTCTCCTCAG 427
  
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RESULT 5

BQ878887

LOCUS BQ878887 931 bp mRNA linear EST 16-AUG-2002

DEFINITION AGENCOURT_8119707 Lupski_dorsal_root_ganglion Homo sapiens cDNA
 clone IMAGE:617774 5', mRNA sequence.

ACCESSION BQ878887

VERSION BQ878887.1 GI:22270895

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 931)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Dr. James R. Lupski

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be
 found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov
Plate: LLAM13556 row: e column: 07
High quality sequence start: 18
High quality sequence stop: 705.

FEATURES Location/Qualifiers
 source 1. .931
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /clone="IMAGE:6177774"
 /sex="male"
 /tissue_type="dorsal root ganglia"
 /dev_stage="adult, 36 yr"
 /lab_host="DH10B"
 /clone_lib="Lupski_dorsal_root_ganglion"
 /note="Vector: pCMV-SPORT6 (Life Technologies); Site_1:
 NotI; Site_2: SalI; cDNA made by oligo-dT priming.
 Directionally cloned using the following adaptors:
 5'-TCGACCCACGCGTCCG-3' and
 5'-GACTAGTTCTAGATCGCGAGCGGCCGCCCT(15)-3'. Size selected >
 1 kb for average insert length 1.7 kb. This is a primary
 library, non-amplified. Library constructed by Life
 Technologies and donated by J. Lupski, M.D./Ph.D. (Baylor
 College of Medicine) and is available through Life
 Technologies."

ORIGIN

Query Match 86.6%; Score 348.8; DB 5; Length 931;
Best Local Similarity 92.5%; Pred. No. 9.3e-90;
Matches 381; Conservative 0; Mismatches 22; Indels 9; Gaps 1;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db 37 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 96

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
 |||
Db 97 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 156

Qy 121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
 |||
Db 157 TGCCTGTCTATAGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 216

Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
 |||
Db 217 GGAAGGGGCTGGAGTGGATTGGGGAAATCAATCTTAGTGGAGGCACCAACTACAACCCG 276

Qy 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
 |||
Db 277 TCCCTCAGGAGTCGAGTCACCATTTTCAGCAGACACGTCCAAGAACCAGGTCTCCCTGAAG 336

Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
 |||
Db 337 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGGTGTGCTTTTCG 396

Qy 361 -----TTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
 |||

Db 397 TTGTACTACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 448

RESULT 6

BG686995

LOCUS BG686995 721 bp mRNA linear EST 01-MAY-2001

DEFINITION 602650991F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4763158 5', mRNA sequence.

ACCESSION BG686995

VERSION BG686995.1 GI:13918392

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 721)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Louis M. Staudt, M.D., Ph.D.

cDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

<http://image.llnl.gov>

Plate: LLCM1618 row: f column: 23

High quality sequence stop: 721.

FEATURES

source

Location/Qualifiers

1..721

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/clone="IMAGE:4763158"

/tissue_type="primary B-cells from tonsils (cell line)"

/lab_host="DH10B (phage-resistant)"

/clone_lib="NIH_MGC_48"

/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;

Site_2: EcoRI; cDNA made by oligo-dT priming.

Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).

Note: this is a NIH_MGC Library."

ORIGIN

Query Match 86.5%; Score 348.6; DB 4; Length 721;

Best Local Similarity 98.9%; Pred. No. 1e-89;

Matches 351; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

Db 7 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 66

Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	67	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	126
Qy	121	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	127	TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	186
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG	240
Db	187	GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG	246
Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	247	TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG	306
Qy	301	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTA	355
Db	307	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTTGTTA	361

RESULT 7

BF663511

LOCUS BF663511 937 bp mRNA linear EST 21-DEC-2000

DEFINITION 602144676F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4297794 5', mRNA sequence.

ACCESSION BF663511

VERSION BF663511.1 GI:11937406

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 937)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Louis M. Staudt, M.D., Ph.D.

cDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

<http://image.llnl.gov>

Plate: LLCM1152 row: h column: 19

High quality sequence stop: 711.

FEATURES

source

Location/Qualifiers

1..937

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/clone="IMAGE:4297794"

/tissue_type="primary B-cells from tonsils (cell line)"

/lab_host="DH10B (phage-resistant)"

/clone_lib="NIH_MGC_48"
 /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
 Site_2: EcoRI; cDNA made by oligo-dT priming.
 Directionally cloned into EcoRI/XhoI sites using the
 following 5' adaptor: GGCACGAG(G). Size-selected >500bp
 for average insert size 1.8kb. Library constructed by Ling
 Hong in the laboratory of Gerald M. Rubin (University of
 California, Berkeley) using ZAP-cDNA synthesis kit
 (Stratagene) and Superscript II RT (Life Technologies).
 Note: this is a NIH_MGC Library."

ORIGIN

Query Match 86.5%; Score 348.6; DB 2; Length 937;
 Best Local Similarity 98.9%; Pred. No. 1.1e-89;
 Matches 351; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
 |||
 Db 7 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 66

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
 |||
 Db 67 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 126

Qy 121 TGCCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
 |||
 Db 127 TGCCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 186

Qy 181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
 |||
 Db 187 GGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 246

Qy 241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
 |||
 Db 247 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 306

Qy 301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTA 355
 |||
 Db 307 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTTGTTA 361

RESULT 8

BG758193
 LOCUS BG758193 834 bp mRNA linear EST 15-MAY-2001
 DEFINITION 602712365F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4852505 5',
 mRNA sequence.
 ACCESSION BG758193
 VERSION BG758193.1 GI:14068846
 KEYWORDS EST.
 SOURCE Homo sapiens (human)
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 REFERENCE 1 (bases 1 to 834)
 AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.
 TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
 JOURNAL Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
<http://image.llnl.gov>
Plate: LLC1697 row: a column: 18
High quality sequence stop: 817.

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FEATURES             Location/Qualifiers
     source            1. .834
                        /organism="Homo sapiens"
                        /mol_type="mRNA"
                        /db_xref="taxon:9606"
                        /clone="IMAGE:4852505"
                        /tissue_type="primary B-cells from tonsils (cell line)"
                        /lab_host="DH10B (phage-resistant)"
                        /clone_lib="NIH_MGC_48"
                        /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
                        Site_2: EcoRI; cDNA made by oligo-dT priming.
                        Directionally cloned into EcoRI/XhoI sites using the
                        following 5' adaptor: GGCACGAG(G). Size-selected >500bp
                        for average insert size 1.8kb. Library constructed by Ling
                        Hong in the laboratory of Gerald M. Rubin (University of
                        California, Berkeley) using ZAP-cDNA synthesis kit
                        (Stratagene) and Superscript II RT (Life Technologies).
                        Note: this is a NIH MGC Library."

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Query Match 85.8%; Score 345.8; DB 4; Length 834;
Best Local Similarity 99.4%; Pred. No. 6.7e-89;
Matches 347; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

[illegible]

Db 303 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAG 351

RESULT 9

BQ707803

LOCUS BQ707803 931 bp mRNA linear EST 16-JUL-2002

DEFINITION AGENCOURT_8353015 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6278020 5', mRNA sequence.

ACCESSION BQ707803

VERSION BQ707803.1 GI:21846702

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 931)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Dr. Mark Watson

cDNA Library Preparation: Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

<http://image.llnl.gov>

Plate: LLCM2465 row: f column: 05

High quality sequence stop: 736.

FEATURES

source

Location/Qualifiers

1..931

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/clone="IMAGE:6278020"

/lab_host="DH10B (phage-resistant)"

/clone_lib="NIH_MGC_113"

/note="Organ: spleen; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor:

GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."

ORIGIN

Query Match 85.7%; Score 345.2; DB 5; Length 931;

Best Local Similarity 90.7%; Pred. No. 1e-88;

Matches 390; Conservative 0; Mismatches 13; Indels 27; Gaps 1;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60

Db 26 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 85

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

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      |||
Db      86 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGAGACCTGTCCCTCACC 145

Qy      121 TGCGCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db      146 TGCGCTGTCCATGGCGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 205

Qy      181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 240
      ||
Db      206 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 265

Qy      241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db      266 TCCCTCAAGAGTCGAGTCAACATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 325

Qy      301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAG----- 347
      |||
Db      326 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGACGACATCGGCTA 385

Qy      348 -----AGTAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 393
      ||
Db      386 TGGTTCGGGGACTTATTCTGTTCTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACC 445

Qy      394 GTCTCCTCAG 403
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Db      446 GTGTCCTCAG 455

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RESULT 10

BG684621

LOCUS BG684621 570 bp mRNA linear EST 01-MAY-2001
 DEFINITION 602636395F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4764118 5', mRNA sequence.

ACCESSION BG684621

VERSION BG684621.1 GI:13916018

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 570)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Louis M. Staudt, M.D., Ph.D.

cDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

<http://image.llnl.gov>

Plate: LLCM1620 row: n column: 23

High quality sequence stop: 561.

FEATURES

Location/Qualifiers

source 1. .570

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/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4764118"
/tissue_type="primary B-cells from tonsils (cell line)"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_48"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACGAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."

```

ORIGIN

```

Query Match          85.6%;  Score 345;  DB 4;  Length 570;
Best Local Similarity 91.4%;  Pred. No. 1.1e-88;
Matches 382;  Conservative 0;  Mismatches 21;  Indels 15;  Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
      |||
Db      51 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 110

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db     111 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 170

Qy     121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     171 TGCCTGTCTATGGTGGGTCCTTCAGTGATTACTACTGGAGCTGGATCCGCCAGCCCCCA 230

Qy     181 GGTAAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 240
      |
Db     231 NGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACAACCCG 290

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     291 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAG 350

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGA----- 348
      |||
Db     351 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAAGCGATGGCTAC 410

Qy     349 ---GTAATTAATTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
      |
Db     411 AATTCGATGATGCTTTTGATATCTGGGGCCAAGGGACAATGGTCACCGTCTCCTCAG 468

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RESULT 11

BG757611

LOCUS BG757611 894 bp mRNA linear EST 15-MAY-2001

DEFINITION 602714787F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4855101 5', mRNA sequence.

ACCESSION BG757611

VERSION BG757611.1 GI:14068264
 KEYWORDS EST.
 SOURCE Homo sapiens (human)
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 REFERENCE 1 (bases 1 to 894)
 AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.
 TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
 JOURNAL Unpublished (1999)
 COMMENT Contact: Robert Strausberg, Ph.D.
 Email: cgapbs-r@mail.nih.gov
 Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
 cDNA Library Preparation: Ling Hong/Rubin Laboratory
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
 DNA Sequencing by: Incyte Genomics, Inc.
 Clone distribution: MGC clone distribution information can be
 found through the I.M.A.G.E. Consortium/LLNL at:
<http://image.llnl.gov>
 Plate: LLCM1703 row: m column: 22
 High quality sequence stop: 842.
 FEATURES Location/Qualifiers
 source 1..894
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /clone="IMAGE:4855101"
 /tissue_type="primary B-cells from tonsils (cell line)"
 /lab_host="DH10B (phage-resistant)"
 /clone_lib="NIH_MGC_48"
 /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
 Site_2: EcoRI; cDNA made by oligo-dT priming.
 Directionally cloned into EcoRI/XhoI sites using the
 following 5' adaptor: GGCACGAG(G). Size-selected >500bp
 for average insert size 1.8kb. Library constructed by Ling
 Hong in the laboratory of Gerald M. Rubin (University of
 California, Berkeley) using ZAP-cDNA synthesis kit
 (Stratagene) and Superscript II RT (Life Technologies).
 Note: this is a NIH_MGC Library."

ORIGIN

Query Match 85.6%; Score 345; DB 4; Length 894;
 Best Local Similarity 91.4%; Pred. No. 1.2e-88;
 Matches 382; Conservative 0; Mismatches 21; Indels 15; Gaps 1;

Qy	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	60
Db	51	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	110
Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	111	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	170
Qy	121	TGCGCTGTCTATGGTGGGTCCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	171	TGCGCTGTCTATGGTGGGTCCCTTCAGTGATTACTACTGGAGCTGGATCCGCCAGCCCCCA	230

for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."

ORIGIN

Query Match 85.4%; Score 344.2; DB 4; Length 632;
Best Local Similarity 91.6%; Pred. No. 1.9e-88;
Matches 380; Conservative 0; Mismatches 23; Indels 12; Gaps 1;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 60
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Db      36 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCTGTCCCAG 95

Qy      61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
      |||
Db      96 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 155

Qy     121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db     156 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 215

Qy     181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 240
      |||
Db     216 GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG 275

Qy     241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db     276 TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAA 335

Qy     301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAA---- 356
      |||
Db     336 CTGAACTCTCTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTGTGGGAGCTA 395

Qy     357 -----TTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAG 403
      |||
Db     396 CGGGAAGTTGCTTTTGATATCTGGGGCCGAGGGACAATGGTCACCGTCTCCTCAG 450

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RESULT 13

BE560828

LOCUS BE560828 701 bp mRNA linear EST 15-AUG-2000

DEFINITION 601346293F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3679582 5',
mRNA sequence.

ACCESSION BE560828

VERSION BE560828.1 GI:9804548

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 701)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM358 row: i column: 23
High quality sequence stop: 652.

FEATURES Location/Qualifiers
source 1. 701
 /organism="Homo sapiens"
 /mol_type="mRNA"
 /db_xref="taxon:9606"
 /clone="IMAGE:3679582"
 /tissue_type="Burkitt lymphoma"
 /lab_host="DH10B (phage-resistant)"
 /clone_lib="NTH_MGC_8"
 /note="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2:
 EcoRI; cDNA made by oligo-dT priming. Directionally
 cloned into EcoRI/XhoI sites using the following 5'
 adaptor: GGCACGAG(G). Size-selected >500bp for average
 insert size 1.8kb. Library constructed by Ling Hong in
 the laboratory of Gerald M. Rubin (University of
 California, Berkeley) using ZAP-cDNA synthesis kit
 (Stratagene) and Superscript II RT (Life Technologies)."

ORIGIN

Query Match 85.4%; Score 344; DB 2; Length 701;
Best Local Similarity 97.2%; Pred. No. 2.2e-88;
Matches 350; Conservative 0; Mismatches 10; Indels 0; Gaps 0;

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Qy      1 ATGAAACACCTGTGGTTCTTCCTCCTCGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60
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Db      2 ATGAAACACCTGTGGTTCTTCCTCCTCGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 61

Qy     61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120
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Db     62 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 121

Qy    121 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 180
      |||
Db    122 TGCCTGTCTATGGTGGGTCCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA 181

Qy    181 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 240
      |||
Db    182 GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGAAGCACCAACTACAACCCG 241

Qy    241 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG 300
      |||
Db    242 TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAAGCAGCTCTCCCTGAAG 301

Qy    301 CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG 360
      |||
Db    302 TTGAGCTCTGTGAACGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTTATTACTAGG 361

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RESULT 14

BE513635

LOCUS BE513635 493 bp mRNA linear EST 07-AUG-2000

DEFINITION 601316029F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3634663 5', mRNA sequence.

ACCESSION BE513635

VERSION BE513635.1 GI:9720847

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 493)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Louis M. Staudt, M.D., Ph.D.

cDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov

Plate: LLCM329 row: j column: 08

High quality sequence stop: 493.

FEATURES

Location/Qualifiers

source

1..493

/organism="Homo sapiens"

/mol_type="mRNA"

/db_xref="taxon:9606"

/clone="IMAGE:3634663"

/tissue_type="Burkitt lymphoma"

/lab_host="DH10B (phage-resistant)"

/clone_lib="NIH_MGC_8"

/note="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."

ORIGIN

Query Match 85.0%; Score 342.4; DB 2; Length 493;

Best Local Similarity 96.9%; Pred. No. 5.9e-88;

Matches 349; Conservative 0; Mismatches 11; Indels 0; Gaps 0;

Qy 1 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 60

|||||

Db 32 ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG 91

Qy 61 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 120

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Db 92 GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC 151

adaptor: GGCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."

ORIGIN

Query Match 85.0%; Score 342.4; DB 2; Length 494;
Best Local Similarity 96.9%; Pred. No. 5.9e-88;
Matches 349; Conservative 0; Mismatches 11; Indels 0; Gaps 0;

Qy	1	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	60
Db	27	ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCTGTCCCAG	86
Qy	61	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	120
Db	87	GTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTCGGAGACCCTGTCCCTCACC	146
Qy	121	TGCGCTGTCTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	180
Db	147	TGCGGTGTTTATGGTGGGTCTTCAGTGGTTACTACTGGAGCTGGATCCGCCAGCCCCCA	206
Qy	181	GGTAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG	240
Db	207	GGGAAGGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGGAAGCACCAACTACAACCCG	266
Qy	241	TCCCTCAAGAGTCGAGTCACCATATCAGTCGACACGTCCAAGAACCAGTTCTCCCTGAAG	300
Db	267	TCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAAGCAGCTCTCCCTGAAG	326
Qy	301	CTGAGCTCTGTGACCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGTAATTAATTGG	360
Db	327	TTGAGCTCTGTGAACGCGCGGACACGGCTGTGTATTACTGTGCGAGAGTTATTACTAGG	386

Search completed: December 2, 2004, 20:56:25
Job time : 2101.71 secs

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:02 ; Search time 2075.71 Seconds
(without alignments)
8839.572 Million cell updates/sec

Title: US-08-728-463B-206
Perfect score: 388
Sequence: 1 ATGGACATGATGGTCCCCGC.....GACCAAGCTGGAGATCAAAC 388

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 4526729 seqs, 23644849745 residues

Total number of hits satisfying chosen parameters: 9053458

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		%					
Result		Query					Description
No.	Score	Match	Length	DB	ID		
1	388	100.0	388	6	AR161375		AR161375 Sequence
2	388	100.0	388	6	AR369968		AR369968 Sequence
3	388	100.0	388	6	BD096602		BD096602 Transgeni

4	368.6	95.0	420	6	AR161429	AR161429 Sequence
5	368.6	95.0	420	6	AR369974	AR369974 Sequence
6	368.6	95.0	420	6	BD096608	BD096608 Transgeni
7	368.6	95.0	3819	6	AR161402	AR161402 Sequence
8	368.6	95.0	3819	6	AR369997	AR369997 Sequence
9	368.6	95.0	3819	6	BD096631	BD096631 Transgeni
10	367.2	94.6	824	9	AY510107	AY510107 Homo sapi
11	367.2	94.6	936	9	BC073764	BC073764 Homo sapi
12	364	93.8	974	6	AX305000	AX305000 Sequence
13	364	93.8	974	6	AX306529	AX306529 Sequence
14	364	93.8	974	6	BD131246	BD131246 Human mon
15	362.4	93.4	728	6	BD182353	BD182353 Anti CD40
16	362.4	93.4	728	6	AX327729	AX327729 Sequence
17	359.2	92.6	433	9	S59162	S59162 Ig V kappa
18	359.2	92.6	716	6	AX327727	AX327727 Sequence
19	351.2	90.5	439	6	AR161377	AR161377 Sequence
20	351.2	90.5	439	6	AR369970	AR369970 Sequence
21	351.2	90.5	439	6	BD096604	BD096604 Transgeni
22	339.8	87.6	986	9	BC067092	BC067092 Homo sapi
23	338.4	87.2	390	6	BD218865	BD218865 Monoclonal
24	336.8	86.8	928	9	AK129817	AK129817 Homo sapi
25	335.6	86.5	384	6	I27685	I27685 Sequence 13
26	335.6	86.5	384	6	I55627	I55627 Sequence 13
27	335.6	86.5	384	9	HUMIGKAAA	L03678 Homo sapien
28	335.2	86.4	390	6	A44324	A44324 Sequence 2
29	335.2	86.4	390	6	A80257	A80257 Sequence 2
30	335.2	86.4	390	6	AR076530	AR076530 Sequence
31	334.8	86.3	388	9	HSIGKLV58	X72479 H.sapiens m
32	333.6	86.0	711	6	CQ795434	CQ795434 Sequence
33	333.6	86.0	953	9	BC005332	BC005332 Homo sapi
34	333.6	86.0	962	9	BC034141	BC034141 Homo sapi
35	332	85.6	390	9	HSFOG1L	X64163 H.sapiens m
36	332	85.6	827	9	AY510106	AY510106 Homo sapi
37	332	85.6	979	9	BC073763	BC073763 Homo sapi
38	331.6	85.5	387	6	BD218850	BD218850 Monoclonal
39	330.4	85.2	438	6	BD015544	BD015544 Human mon
40	330.4	85.2	438	6	BD094922	BD094922 Human mon
41	329.2	84.8	391	9	HSIGKLV57	X72478 H.sapiens m
42	328.8	84.7	396	9	HSPBLIGVD	Z27173 H.sapiens r
43	328.8	84.7	429	9	HUMIGKW	M74019 Homo sapien
44	327.4	84.4	379	9	HSIGKLV05	X72426 H.sapiens m
45	327.2	84.3	388	9	HSA548508	AJ548508 Homo sapi

ALIGNMENTS

RESULT 1

AR161375

LOCUS AR161375 388 bp DNA linear PAT 17-OCT-2001
 DEFINITION Sequence 358 from patent US 6255458.
 ACCESSION AR161375
 VERSION AR161375.1 GI:16227235
 KEYWORDS
 SOURCE Unknown.
 ORGANISM Unknown.
 Unclassified.

REFERENCE 1 (bases 1 to 388)
AUTHORS Lonberg,N. and Kay,R.M.
TITLE High affinity human antibodies and human antibodies against digoxin
JOURNAL Patent: US 6255458-A 358 03-JUL-2001;
FEATURES Location/Qualifiers
source 1. .388
/organism="unknown"
/mol_type="unassigned DNA"

ORIGIN

Query Match 100.0%; Score 388; DB 6; Length 388;
Best Local Similarity 100.0%; Pred. No. 3.8e-119;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy 61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Qy 121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Db 121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy 181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
|||||
Db 181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy 241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
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Db 241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy 301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Db 301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

Qy 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388

RESULT 2

AR369968
LOCUS AR369968 388 bp DNA linear PAT 12-SEP-2003
DEFINITION Sequence 206 from patent US 6300129.
ACCESSION AR369968
VERSION AR369968.1 GI:34606408
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 388)
AUTHORS Lonberg,N. and Kay,R.M.
TITLE Transgenic non-human animals for producing heterologous antibodies
JOURNAL Patent: US 6300129-A 206 09-OCT-2001;

FEATURES Location/Qualifiers
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 /organism="unknown"
 /mol_type="genomic DNA"

ORIGIN

Query Match 100.0%; Score 388; DB 6; Length 388;
Best Local Similarity 100.0%; Pred. No. 3.8e-119;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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Db      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Db     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy    121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Db    121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy    181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Db    181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
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Db    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy    301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Db    301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

Qy    361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db    361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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RESULT 3
BD096602
LOCUS BD096602 388 bp DNA linear PAT 27-AUG-2002
DEFINITION Transgenic non-human animals capable of producing heterologous
 antibodies.
ACCESSION BD096602
VERSION BD096602.1 GI:22642190
KEYWORDS JP 2001527386-A/129.
SOURCE unidentified
 ORGANISM unidentified
 unclassified.
REFERENCE 1 (bases 1 to 388)
 AUTHORS Lonberg,N. and Kay,R.M.
 TITLE Transgenic non-human animals capable of producing heterologous
 antibodies
 JOURNAL Patent: JP 2001527386-A 129 25-DEC-2001;
 GENPHARM INTERNATIONAL
COMMENT OS Unidentified

PN JP 2001527386-A/129
 PD 25-DEC-2001
 PF 01-DEC-1997 JP 1998525687
 PR 02-DEC-1996 US 08/758417
 PI NILS LONBERG, ROBERT M KAY
 PC C12N5/00, C12N5/28, C12N5/24, C12N5/10, C07K16/00, A61K39/00 CC
 Strandedness: Single;
 CC Topology: Linear;
 CC Transgenic non-human animals capable of
 producing heterologous
 CC antibodies
 FH Key Location/Qualifiers
 FT source 1. .388
 FT /organism='Unidentified'.

FEATURES Location/Qualifiers
 source 1. .388
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ORIGIN

Query Match 100.0%; Score 388; DB 6; Length 388;
 Best Local Similarity 100.0%; Pred. No. 3.8e-119;
 Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	ATGGACATGATGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC	60
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Qy	61	AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA	120
Db	61	AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA	120
Qy	121	GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT	180
Db	121	GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT	180
Qy	181	AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC	240
Db	181	AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC	240
Qy	241	CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG	300
Db	241	CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG	300
Qy	301	CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT	360
Db	301	CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT	360
Qy	361	GGCCAGGGGACCAAGCTGGAGATCAAAC	388
Db	361	GGCCAGGGGACCAAGCTGGAGATCAAAC	388

RESULT 4

AR161429

LOCUS AR161429 420 bp DNA linear PAT 17-OCT-2001

DEFINITION Sequence 420 from patent US 6255458.
 ACCESSION AR161429
 VERSION AR161429.1 GI:16227307
 KEYWORDS .
 SOURCE Unknown.
 ORGANISM Unknown.
 Unclassified.
 REFERENCE 1 (bases 1 to 420)
 AUTHORS Lonberg,N. and Kay,R.M.
 TITLE High affinity human antibodies and human antibodies against digoxin
 JOURNAL Patent: US 6255458-A 420 03-JUL-2001;
 FEATURES Location/Qualifiers
 source 1..420
 /organism="unknown"
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ORIGIN

Query Match 95.0%; Score 368.6; DB 6; Length 420;
 Best Local Similarity 97.7%; Pred. No. 1.3e-112;
 Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy	6	CATGATGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCAGGTTCCAGATG	65
Db	12	CATGATGGTCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCAGGTTCCAGATG	71
Qy	66	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	125
Db	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Qy	126	CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	185
Db	132	CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Qy	186	AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Db	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Qy	246	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Db	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Qy	306	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA	365
Db	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Qy	366	GGGGACCAAGCTGGAGATCAAAC	388
Db	372	GGGAACCAAGCTGGAGATCAAAC	394

RESULT 5
 AR369974
 LOCUS AR369974 420 bp DNA linear PAT 12-SEP-2003
 DEFINITION Sequence 220 from patent US 6300129.
 ACCESSION AR369974
 VERSION AR369974.1 GI:34606414
 KEYWORDS .

SOURCE Unknown.
 ORGANISM Unknown.
 Unclassified.
 REFERENCE 1 (bases 1 to 420)
 AUTHORS Lonberg,N. and Kay,R.M.
 TITLE Transgenic non-human animals for producing heterologous antibodies
 JOURNAL Patent: US 6300129-A 220 09-OCT-2001;
 FEATURES Location/Qualifiers
 source 1..420
 /organism="unknown"
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ORIGIN

Query Match 95.0%; Score 368.6; DB 6; Length 420;
 Best Local Similarity 97.7%; Pred. No. 1.3e-112;
 Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

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Qy      6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
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Db     12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
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Qy     66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
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Db     72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
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Qy    126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
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Db    132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
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Qy    186 AGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
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Db    192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
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Qy    246 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
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Db    252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
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Qy    306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
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Db    312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
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Qy    366 GGGGACCAAGCTGGAGATCAAAC 388
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Db    372 GGGAACCAAGCTGGAGATCAAAC 394
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RESULT 6

BD096608

LOCUS BD096608 420 bp DNA linear PAT 27-AUG-2002

DEFINITION Transgenic non-human animals capable of producing heterologous antibodies.

ACCESSION BD096608

VERSION BD096608.1 GI:22642196

KEYWORDS JP 2001527386-A/135.

SOURCE unidentified

ORGANISM unidentified
 unclassified.

Db 372 G G G A A C C A A G C T G G A G A T C A A A C 394

RESULT 7

AR161402

LOCUS	AR161402	3819 bp	DNA	linear	PAT 17-OCT-2001
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DEFINITION Sequence 393 from patent US 6255458.

ACCESSION AR161402

VERSION AR161402.1 GI:16227274

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 3819)

AUTHORS Lonberg, N. and Kay, R.M.

TITLE High affinity human antibodies and human antibodies against digoxin

JOURNAL Patent: US 6255458-A 393 03-JUL-2001:

FEATURES	Location/Qualifiers
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source      1.  .3819
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/organism="unknown"
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/mol type="unassigned DNA"
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ORIGIN

Query Match 95.0%; Score 368.6; DB 6; Length 3819;

Best Local Similarity 97.7%; Pred. No. 1.4e-112;

Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy 6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCAGGTTCCAGATG 65

| | | | |

Db 2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy 66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Db 2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564

Qv 126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185

Db 2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624

Qy 186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

Db 2625 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 2684

Qy 246 AAGGTT CAGCGG CAGTGG ATCTGG GACAGAT TTTCACT CTCACCA TCAGCAG CCTGCAG CC 305

Db 2685 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 2744

Ov 306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365

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AR369997

ORIGIN

Query Match 95.0%; Score 368.6; DB 6; Length 3819;
Best Local Similarity 97.7%; Pred. No. 1.4e-112;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

[illegible]

BD096631

LOCUS	BD096631	3819 bp	DNA	linear	PAT 27-AUG-2002
DEFINITION	Transgenic non-human animals capable of producing heterologous				

antibodies.

ACCESSION BD096631

VERSION BD096631.1 GI:22642219

KEYWORDS JP 2001527386-A/158.

SOURCE unidentified

ORGANISM unidentified

unclassified.

REFERENCE 1 (bases 1 to 3819)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE Transgenic non-human animals capable of producing heterologous antibodies

JOURNAL Patent: JP 2001527386-A 158 25-DEC-2001;
GENPHARM INTERNATIONAL

COMMENT OS Unidentified

PN JP 2001527386-A/158

PD 25-DEC-2001

PF 01-DEC-1997 JP 1998525687

PR 02-DEC-1996 US 08/758417

PI NILS LONBERG,ROBERT M KAY

PC C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC

Strandedness: Single;

CC Topology: Linear;

CC Transgenic non-human animals capable of
producing heterologous

CC antibodies

FH Key Location/Qualifiers

FT source 1. .3819

FT /organism='Unidentified'.

FEATURES Location/Qualifiers

source 1. .3819

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ORIGIN

Query Match 95.0%; Score 368.6; DB 6; Length 3819;

Best Local Similarity 97.7%; Pred. No. 1.4e-112;

Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy 6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65

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Db 2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 2504

Qy 66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125

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Qy 126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAAACC 185

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Qy 186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

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Qy 246 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305

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Qy     181 AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Qy     301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Qy     361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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RESULT 11

BC073764

LOCUS BC073764 936 bp mRNA linear PRI 30-JUN-2004

DEFINITION Homo sapiens cDNA clone MGC:88771 IMAGE:4576136, complete cds.

ACCESSION BC073764

VERSION BC073764.1 GI:49256424

KEYWORDS MGC.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 936)

AUTHORS Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G.,
Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D.,
Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K.,
Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J., Hsieh,F.,
Diatchenko,L., Marusina,K., Farmer,A.A., Rubin,G.M., Hong,L.,
Stapleton,M., Soares,M.B., Bonaldo,M.F., Casavant,T.L.,
Scheetz,T.E., Brownstein,M.J., Usdin,T.B., Toshiyuki,S.,
Carninci,P., Prange,C., Raha,S.S., Loquellano,N.A., Peters,G.J.,
Abramson,R.D., Mullahy,S.J., Bosak,S.A., McEwan,P.J.,
McKernan,K.J., Malek,J.A., Gunaratne,P.H., Richards,S.,
Worley,K.C., Hale,S., Garcia,A.M., Gay,L.J., Hulyk,S.W.,
Villalon,D.K., Muzny,D.M., Sodergren,E.J., Lu,X., Gibbs,R.A.,
Fahey,J., Helton,E., Kettelman,M., Madan,A., Rodrigues,S.,
Sanchez,A., Whiting,M., Madan,A., Young,A.C., Shevchenko,Y.,
Bouffard,G.G., Blakesley,R.W., Touchman,J.W., Green,E.D.,
Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmutz,J., Myers,R.M.,
Butterfield,Y.S., Krzywinski,M.I., Skalska,U., Smailus,D.E.,

TITLE Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A.
 Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
 PUBMED 12477932
 REFERENCE 2 (bases 1 to 936)
 AUTHORS Strausberg,R.
 TITLE Direct Submission
 JOURNAL Submitted (23-JUN-2004) National Institutes of Health, Mammalian
 Gene Collection (MGC), Cancer Genomics Office, National Cancer
 Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
 USA
 REMARK NIH-MGC Project URL: <http://mgc.nci.nih.gov>
 COMMENT Contact: MGC help desk
 Email: cgapbs-r@mail.nih.gov
 Tissue Procurement: Louis Staudt
 cDNA Library Preparation: Rubin Laboratory
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
 DNA Sequencing by: Sequencing Group at the Stanford Human Genome
 Center, Stanford University School of Medicine, Stanford, CA 94305
 Web site: <http://www-shgc.stanford.edu>
 Contact: (Dickson, Mark) mcd@paxil.stanford.edu
 Dickson, M., Schmutz, J., Grimwood, J., Rodriguez, A., and Myers,
 R. M.

Clone distribution: MGC clone distribution information can be found
 through the I.M.A.G.E. Consortium/LLNL at: <http://image.llnl.gov>
 Series: IRAL Plate: 58 Row: c Column: 10
 This clone was selected for full length sequencing because it
 passed the following selection criteria: GenomeScan gene
 prediction, Similarity but not identity to protein.

FEATURES Location/Qualifiers
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 /clone_lib="NIH_MGC_48"
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 /note="Vector: pOTB7"
 CDS 12. .722
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ORIGIN

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 Best Local Similarity 96.6%; Pred. No. 4e-112;
 Matches 375; Conservative 0; Mismatches 13; Indels 0; Gaps 0;

Qy 1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
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 Db 12 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 71

Qy 61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Qy 121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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 Db 132 GTCACCATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 191

Qy 181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
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Qy 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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 Db 372 GGCCCTGGGACCAAAGTGGATATCAAAC 399

RESULT 12

AX305000

LOCUS AX305000 974 bp DNA linear PAT 11-DEC-2001

DEFINITION Sequence 29 from Patent EP1158004.

ACCESSION AX305000

VERSION AX305000.1 GI:17644678

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1

AUTHORS Takashi,T., Katsunari,T.P. and Nobuaki,H.

TITLE Human monoclonal antibody against a costimulatory signal
 transduction molecule ailim and pharmaceutical use thereof

JOURNAL Patent: EP 1158004-A 29 28-NOV-2001;
 Japan Tobacco Inc. (JP)

FEATURES

Location/Qualifiers
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 CDS 39. .749
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sig_peptide	39. .104
3'UTR	750. .974

TITLE Human monoclonal antibody against a costimulatory signal
transduction molecule ailim and pharmaceutical use thereof

JOURNAL Patent: WO 0187981-A 29 22-NOV-2001;
Japan Tobacco Inc. (JP)

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sig_peptide 39. .104
3'UTR 750. .974

ORIGIN

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Matches 373; Conservative 0; Mismatches 15; Indels 0; Gaps 0;

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Qy	181	AAACCAGGGAAAGCCCCCTAAGTCTCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC	240
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RESULT 15

BD182353

LOCUS BD182353 728 bp DNA linear PAT 15-MAY-2003

DEFINITION Anti CD40 monoclonal antibody.

ACCESSION BD182353

VERSION BD182353.1 GI:30793271

KEYWORDS WO 02088186-A/46.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 728)

AUTHORS Mikayama,T., Yoshida,H., Force,W.R., Chen,X. and Takahashi,N.

TITLE Anti CD40 monoclonal antibody

JOURNAL Patent: WO 02088186-A 46 07-NOV-2002;
KIRIN BREWERY CO LTD,TOSHIFUMI MIKAYAMA,HITOSHI YOSHIDA, WALKER R
FORCE, XINGJIE CHEN,NOBUAKI TAKAHASHI

COMMENT OS Homo sapiens (human)

PN WO 02088186-A/46

PD 07-NOV-2002

PF 26-APR-2002 WO 2002JP004292

PR 27-APR-2001 WO PCTUS0113672,11-MAY-2001 JP 01P 142482 PR

05-OCT-2001 JP 01P 310535,26-OCT-2001 US 10/040244 PI

TOSHIFUMI MIKAYAMA,HITOSHI YOSHIDA,WALKER

R FORCE,XINGJIE CHEN,

PI NOBUAKI TAKAHASHI

PC C07K16/28,C12N15/13,C12N5/10,C12P21/08,A61K39/395,A61P35/00,

PC A61P37/04,

PC A61P37/06,A61P37/08,A61P7/00

CC Anti CD40 monoclonal antibody

FH Key Location/Qualifiers

FT source 1. .728

FT /organism='Homo sapiens (human)'. .

FEATURES Location/Qualifiers

source 1. .728

/organism="Homo sapiens"

/mol_type="genomic DNA"

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ORIGIN

Query Match 93.4%; Score 362.4; DB 6; Length 728;
 Best Local Similarity 95.9%; Pred. No. 1.7e-110;
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Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Qy     121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Qy     301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Db     419 GGCCAAGGGACCAAGGTGGAGATCAAAC 446
  
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Search completed: December 2, 2004, 17:01:13
 Job time : 2086.71 secs

GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:02 ; Search time 300.42 Seconds
 (without alignments)
 6779.752 Million cell updates/sec

Title: US-08-728-463B-206
 Perfect score: 388
 Sequence: 1 ATGGACATGATGGTCCCCGC.....GACCAAGCTGGAGATCAAAC 388

Scoring table: IDENTITY_NUC
 Gapop 10.0 , Gapext 1.0

Searched: 4134886 seqs, 2624710521 residues

Total number of hits satisfying chosen parameters: 8269772

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : N_Geneseq_23Sep04:*

- 1: geneseqn1980s:*
- 2: geneseqn1990s:*
- 3: geneseqn2000s:*
- 4: geneseqn2001as:*
- 5: geneseqn2001bs:*
- 6: geneseqn2002as:*
- 7: geneseqn2002bs:*
- 8: geneseqn2003as:*
- 9: geneseqn2003bs:*
- 10: geneseqn2003cs:*
- 11: geneseqn2003ds:*
- 12: geneseqn2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	% Query		Length	DB	ID	Description
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1	388	100.0	388	2	AAT73441	Aat73441 Human imm
2	388	100.0	388	2	AAV39239	Aav39239 Functiona
3	388	100.0	388	2	AAZ21993	Aaz21993 Partial n
4	368.6	95.0	420	2	AAT73445	Aat73445 Human imm
5	368.6	95.0	420	2	AAV39293	Aav39293 Synthetic
6	368.6	95.0	420	2	AAZ22047	Aaz22047 Nucleotid
7	368.6	95.0	3819	2	AAT78825	Aat78825 Kappa lig
8	368.6	95.0	3819	2	AAV39266	Aav39266 Plasmid p
9	368.6	95.0	3819	2	AAZ22020	Aaz22020 Nucleotid
10	366.2	94.4	401	12	ADH56388	Adh56388 Variable
11	364	93.8	974	6	AAS99473	Aas99473 Anti-huma
12	362.4	93.4	728	8	ABT31882	Abt31882 Anti-CD40
13	354.2	91.3	711	11	ADM47072	Adm47072 Mouse ant
14	351.2	90.5	409	2	AAV39241	Aav39241 Functiona
15	351.2	90.5	439	2	AAT73443	Aat73443 Human imm
16	349.6	90.1	439	2	AAZ21995	Aaz21995 Partial n
17	348.4	89.8	705	10	ADE28412	Ade28412 Human ant
18	348.4	89.8	705	10	ADE28428	Ade28428 Human ant
19	338.4	87.2	390	3	AAZ39340	Aaz39340 Nucleotid
20	335.6	86.5	384	2	AAT46133	Aat46133 Monoclonal
21	335.6	86.5	384	2	AAT85844	Aat85844 Monoclonal
22	335.6	86.5	384	10	AAL56203	Aal56203 Human C40
23	335.6	86.5	384	12	ADQ20176	Adq20176 Human sof
24	335.2	86.4	390	2	AAQ87237	Aaq87237 Anti-inte
25	333.6	86.0	426	8	ADA43064	Ada43064 Human ant

26	333.6	86.0	711	12	ADM32966	Adm32966 Nucleotid
27	332	85.6	1106	6	ABQ54241	Abq54241 Human ova
28	331.6	85.5	387	3	AAZ39325	Aaz39325 Nucleotid
29	331	85.3	404	12	ADI13463	Adi13463 Human var
30	330.4	85.2	438	4	AAH41157	Aah41157 Human cod
31	330.2	85.1	463	8	AAD56221	Aad56221 Human AB-
32	330.2	85.1	6082	8	AAD56212	Aad56212 Human AB-
33	327.2	84.3	981	12	ADP07904	Adp07904 Human imm
34	325.6	83.9	714	3	AAA46899	Aaa46899 DNA encod
35	325.6	83.9	714	10	AAD54350	Aad54350 Human 11.
36	325.6	83.9	729	3	AAA11630	Aaa11630 Human imm
37	325.6	83.9	729	6	ABL46009	Abl46009 Humanised
38	324	83.5	1066	2	AAQ49943	Aaq49943 Human ant
39	323.8	83.5	463	8	AAD56219	Aad56219 Human AB-
40	323.8	83.5	6082	8	AAD56211	Aad56211 Human AB-
41	322.4	83.1	817	3	AAA27389	Aaa27389 Human IGF
42	321.4	82.8	772	6	ABQ56247	Abq56247 Human ova
43	320.8	82.7	378	10	ADE07520	Ade07520 Novel cod
44	320.8	82.7	396	2	AAT75423	Aat75423 Human ant
45	320.8	82.7	698	8	ABT31880	Abt31880 Anti-CD40

ALIGNMENTS

RESULT 1

AAT73441

ID AAT73441 standard; DNA; 388 BP.

XX

AC AAT73441;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-OCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1997-235888/21.

XX

PT Novel anti-CD4 antibody produced by transgenic mice - used in the

PT treatment of auto-immune disease etc.

XX
PS Claim 44; Page 255; 396pp; English.
XX
CC A novel composition has been developed which comprises an immunoglobulin
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC -1 for binding to a predetermined human antigen. The present sequence
CC represents a human light chain variable region partial nucleotide
CC sequence, 10C5 kappa, which encodes an amino acid sequence from a claimed
CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC may be used in therapeutic and diagnostic applications, especially for
CC the treatment of human diseases. These antibodies reduce activity of CD4
CC cells and reduce undesirable autoimmune reactions, inflammatory response
CC and transplant rejection. Transgenic animals are capable of producing
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. These animals produce a first Ig type that is necessary for
CC antigen-stimulated B-cell maturation and can switch to encode and produce
CC one or more subsequent heterologous isotypes
XX
SQ Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;

Query Match 100.0%; Score 388; DB 2; Length 388;
Best Local Similarity 100.0%; Pred. No. 1e-110;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db	301	CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT	360
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Db	361	GGCCAGGGGACCAAGCTGGAGATCAAAC	388

RESULT 2
AAV39239
ID AAV39239 standard; DNA; 388 BP.
XX

AC AAV39239;
 XX
 DT 18-DEC-1998 (first entry)
 XX
 DE Functional Kappa transcript isolated from transgenic cell line 10C5.
 XX
 KW Transgenic animal; human heterologous antibody; transgene;
 KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
 KW autoimmune reaction; inflammatory response; transplant rejection;
 KW acid induced lung injury; acute adult respiratory distress syndrome;
 KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
 KW cystic fibrosis; ss.
 XX
 OS Synthetic.
 OS Homo sapiens.
 OS Mus sp.
 XX
 PN WO9824884-A1.
 XX
 PD 11-JUN-1998.
 XX
 PF 01-DEC-1997; 97WO-US021803.
 XX
 PR 02-DEC-1996; 96US-00758417.
 XX
 PA (GENP-) GENPHARM INT.
 XX
 PI Lonberg N, Kay RM;
 XX
 DR WPI; 1998-333306/29.
 XX
 PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
 PT efflux of neutrophils from vasculature, and treat reperfusion injury.
 XX
 PS Example 41; Page 304; 452pp; English.
 XX
 CC AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
 CC antibody. The sequences are isolated from 5 different transgenic mouse
 CC hybridoma cell lines. The specification describes transgenic non-human
 CC animals, especially a mouse, which are capable of producing a human
 CC heterologous antibodies of multiple isotypes by undergoing isotype
 CC switching. The transgenic animals have human heavy and light chain
 CC transgenes. The transgenes are capable of functionally rearranging a
 CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
 CC recombination. The transgenes include a heavy chain transgene comprising
 CC at least one V, D and J gene segment, and one constant region gene
 CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
 CC one V and J gene segment and one constant region gene segment. The gene
 CC segments are heterologous to the transgenic animal. The antibody can be
 CC used to prevent efflux of neutrophils from vasculature. It can also be
 CC used to treat reperfusion injury. CD4 binding antibodies are used to
 CC reduce undesirable autoimmune reactions, inflammatory responses and
 CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
 CC tissue damage and prolong survival in animal models of acute adult
 CC respiratory distress syndrome (ARDS) and acid induced lung injury. The
 CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
 CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis

```

XX
SQ      Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;

Query Match          100.0%;   Score 388;   DB 2;   Length 388;
Best Local Similarity 100.0%;   Pred. No. 1e-110;
Matches 388;   Conservative    0;   Mismatches    0;   Indels      0;   Gaps      0;

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Qy          61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Qy          121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Qy          241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
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Qy          361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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PD 16-SEP-1999.
XX
XX
PF 12-MAR-1999; 99WO-US005535.
XX
PR 13-MAR-1998; 98US-00042353.
XX
PA (GENP-) GENPHARM INT INC.
XX
PI Lonberg N, Fishwild DM, Ball WJ;
XX
DR WPI; 1999-551219/46.
XX
PT Novel transgenic non-human animals used to produce heterologous
PT antibodies.
XX
PS Example 41; Page 305; 484pp; English.
XX
CC The specification describes transgenic animals that are capable of
CC producing a heterologous antibody. The antibodies are isolated form a
CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC having a genome comprising a human heavy chain transgene and a human
CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence represents a partial
CC nucleotide sequence for a functional transcript used in the course of the
CC invention
XX
SQ Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;

Query Match 100.0%; Score 388; DB 2; Length 388;
Best Local Similarity 100.0%; Pred. No. 1e-110;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
   |||||||
Db 1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy 61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
   |||||||
Db 61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy 121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
   |||||||
Db 121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180

Qy 181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTTC 240
   |||||||
Db 181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTTC 240

Qy 241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
   |||||||

```

Db 241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

QY 301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
 |||

Db 301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360

QY 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
 |||

Db 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388

RESULT 4

AAT73445

ID AAT73445 standard; DNA; 420 BP.

XX

AC AAT73445;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-OCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1997-235888/21.

XX

PT Novel anti-CD4 antibody produced by transgenic mice - used in the

PT treatment of auto-immune disease etc.

XX

PS Claim 45; Page 272-273; 396pp; English.

XX

CC A novel composition has been developed which comprises an immunoglobulin
 CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
 CC -1 for binding to a predetermined human antigen. The present sequence
 CC represents a human light chain variable region partial nucleotide
 CC sequence, LC6G5, which encodes an amino acid sequence from a claimed
 CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
 CC may be used in therapeutic and diagnostic applications, especially for
 CC the treatment of human diseases. These antibodies reduce activity of CD4
 CC cells and reduce undesirable autoimmune reactions, inflammatory response
 CC and transplant rejection. Transgenic animals are capable of producing
 CC heterologous antibodies of multiple isotypes by undergoing isotype

OS Homo sapiens.
 XX
 PN WO9824884-A1.
 XX
 PD 11-JUN-1998.
 XX
 PF 01-DEC-1997; 97WO-US021803.
 XX
 PR 02-DEC-1996; 96US-00758417.
 XX
 PA (GENP-) GENPHARM INT.
 XX
 PI Lonberg N, Kay RM;
 XX
 DR WPI; 1998-333306/29.
 XX
 PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
 PT efflux of neutrophils from vasculature, and treat reperfusion injury.
 XX
 PS Example 42; Page 324-325; 452pp; English.
 XX
 CC The present sequence represents a synthetic kappa light sequence (created
 CC using oligonucleotides AAV39267-78). This synthetic sequence differs from
 CC natural sequences in that strings of repeated oligonucleotides are
 CC interrupted (to facilitate oligonucleotide synthesis and PCR
 CC amplification), optimal translation initiation sites are incorporated and
 CC HindII sites were engineered upstream of the translation initiation
 CC sites. The sequence is used to make plasmid pHCG5, which is used in the
 CC construction of minigenes for expression of IgGkappa anti-CD4 antibodies,
 CC in the transgenic mouse of the invention. The specification describes
 CC transgenic non-human animals, especially a mouse, which are capable of
 CC producing a human heterologous antibodies of multiple isotypes by
 CC undergoing isotype switching. The transgenic animals have human heavy and
 CC light chain transgenes. The transgenes are capable of functionally
 CC rearranging a heterologous diversity (D) gene in a variable-diversity-
 CC junction (V-D-J) recombination. The transgenes include a heavy chain
 CC transgene comprising at least one V, D and J gene segment, and one
 CC constant region gene segment. The immunoglobulin (Ig) light chain
 CC transgene comprises at least one V and J gene segment and one constant
 CC region gene segment. The gene segments are heterologous to the transgenic
 CC animal. The antibody can be used to prevent efflux of neutrophils from
 CC vasculature. It can also be used to treat reperfusion injury. CD4 binding
 CC antibodies are used to reduce undesirable autoimmune reactions,
 CC inflammatory responses and rejection of transplanted organs. The anti-IL-
 CC 8 antibodies can reduce tissue damage and prolong survival in animal
 CC models of acute adult respiratory distress syndrome (ARDS) and acid
 CC induced lung injury. The anti-IL-8 antibodies can also be used for the
 CC treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)
 CC and cystic fibrosis
 XX
 SQ Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;

Query Match 95.0%; Score 368.6; DB 2; Length 420;
 Best Local Similarity 97.7%; Pred. No. 1.2e-104;
 Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

QY 6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65

Db	12	CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTC	71
Qy	66	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	125
Db	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Qy	126	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	185
Db	132	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Qy	186	AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Db	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Qy	246	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Db	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Qy	306	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA	365
Db	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Qy	366	GGGGACCAAGCTGGAGATCAAAC	388
Db	372	GGGAACCAAGCTGGAGATCAAAC	394

XX
DR WPI; 1999-551219/46.
XX
PT Novel transgenic non-human animals used to produce heterologous
PT antibodies.
XX
PS Example 42; Page 325-326; 484pp; English.
XX
CC The specification describes transgenic animals that are capable of
CC producing a heterologous antibody. The antibodies are isolated from a
CC hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC having a genome comprising a human heavy chain transgene and a human
CC light chain transgene. The B cells are fused to immortalized cells
CC suitable for generating a hybridoma, which produces a detectable amount
CC of an immunoglobulin that specifically binds digoxin or Shinga-like
CC toxin. B cells from transgenic animals can be used to generate hybridomas
CC expressing monoclonal high affinity human sequence antibodies. Antibodies
CC produced from the transgenic animals of the invention can be used to
CC treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC disease, transplant rejection, blood disorders such as coagulation
CC disorders and other diseases. The present sequence is used in the course
CC of the invention
XX
SQ Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;

Query Match 95.0%; Score 368.6; DB 2; Length 420;
Best Local Similarity 97.7%; Pred. No. 1.2e-104;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy 6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
| | | | |
Db 12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

Qy 66 CGACATCCAGATGACCCAGTCTCCATCTTCGGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
| | | | |
Db 72 CGACATCCAGATGACCCAGTCTCCATCTTCGGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

Qy 126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
| | | | |
Db 132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191

Qy 186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTTGCAAAGTGGGGTCCCATC 245
| | | | |
Db 192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTTGCAAAGTGGTGTCCCATC 251

Qy 246 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
| | | | |
Db 252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy 306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTTCCCGTACACTTTTGGCCA 365
| | | | |
Db 312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTTCCCGTACACTTTTGGTCA 371

Qy 366 GGGGACCAAGCTGGAGATCAAAC 388
| | | | |
Db 372 GGGAACCAAGCTGGAGATCAAAC 394

RESULT 7

AAT78825

ID AAT78825 standard; DNA; 3819 BP.

XX

AC AAT78825;

XX

DT 23-JAN-1998 (first entry)

XX

DE Kappa light chain plasmid pLC6G5.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; immunoglobulin; ss.

XX

OS Synthetic.

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-OCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1997-235888/21.

XX

PT Novel anti-CD4 antibody produced by transgenic mice - used in the

PT treatment of auto-immune disease etc.

XX

PS Example 42; Page 266-268; 396pp; English.

XX

CC A novel composition has been developed which comprises an immunoglobulin
 CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
 CC -1 for binding to a predetermined human antigen. The present sequence
 CC represents the kappa light chain plasmid pLC6G5 which includes the kappa
 CC constant region and polyadenylation site. Anti- CD4 antibodies may be
 CC used in therapeutic and diagnostic applications, especially for the
 CC treatment of human diseases. These antibodies reduce activity of CD4
 CC cells and reduce undesirable autoimmune reactions, inflammatory response
 CC and transplant rejection. Transgenic animals are capable of producing
 CC heterologous antibodies of multiple isotypes by undergoing isotype
 CC switching. These animals produce a first Ig type that is necessary for
 CC antigen-stimulated B-cell maturation and can switch to encode and produce
 CC one or more subsequent heterologous isotypes

XX

SQ Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;

Query Match 95.0%; Score 368.6; DB 2; Length 3819;

Best Local Similarity 97.7%; Pred. No. 2.9e-104;

Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

PA (GENP-) GENPHARM INT.
XX
PI Lonberg N, Kay RM;
XX
DR WPI; 1998-333306/29.
XX
PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS Example 42; Page 317-319; 452pp; English.
XX

CC The present sequence represents a plasmid, pLC6G5, which contains a
CC synthetic kappa light chain sequence (created using oligonucleotide
CC AAV39244-65). This synthetic sequence differs from natural sequences in
CC that strings of repeated oligonucleotides are interrupted (to facilitate
CC oligonucleotide synthesis and PCR amplification), optimal translation
CC initiation sites are incorporated and HindII sites were engineered
CC upstream of the translation initiation sites. The plasmid is used in the
CC construction of minigenes for expression of IgGkappa anti-CD4 antibodies,
CC in the transgenic mouse of the invention. The specification describes
CC transgenic non-human animals, especially a mouse, which are capable of
CC producing a human heterologous antibodies of multiple isotypes by
CC undergoing isotype switching. The transgenic animals have human heavy and
CC light chain transgenes. The transgenes are capable of functionally
CC rearranging a heterologous diversity (D) gene in a variable-diversity-
CC junction (V-D-J) recombination. The transgenes include a heavy chain
CC transgene comprising at least one V, D and J gene segment, and one
CC constant region gene segment. The immunoglobulin (Ig) light chain
CC transgene comprises at least one V and J gene segment and one constant
CC region gene segment. The gene segments are heterologous to the transgenic
CC animal. The antibody can be used to prevent efflux of neutrophils from
CC vasculature. It can also be used to treat reperfusion injury. CD4 binding
CC antibodies are used to reduce undesirable autoimmune reactions,
CC inflammatory responses and rejection of transplanted organs. The anti-IL-
CC 8 antibodies can reduce tissue damage and prolong survival in animal
CC models of acute adult respiratory distress syndrome (ARDS) and acid
CC induced lung injury. The anti-IL-8 antibodies can also be used for the
CC treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)
CC and cystic fibrosis

XX
SQ Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;

Query Match 95.0%; Score 368.6; DB 2; Length 3819;
Best Local Similarity 97.7%; Pred. No. 2.9e-104;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

QY 6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCAGGTTCCAGATG 65
|||||
Db 2445 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCAGGTTCCAGATG 2504
QY 66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
|||||
Db 2505 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 2564
QY 126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
|||||
Db 2565 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 2624


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      |||
Db      195 AAACCAGGGAAAGCCCTAAGCTCCTGATCTATGATGCATCCAGTTTGCAAAGTGGGGTC 254
      |||
QY      241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
      |||
Db      255 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 314
      |||
QY      301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
      |||
Db      315 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCTCACTTTC 374
      |||
QY      361 GGCCAGGGGACCAAGCTGGAGATCAAA 387
      |||
Db      375 GGCGGAGGGACCAAGGTGGAGATCAAA 401

```

RESULT 11

AAS99473

ID AAS99473 standard; cDNA; 974 BP.

XX

AC AAS99473;

XX

DT 12-MAR-2002 (first entry)

XX

DE Anti-human AILIM monoclonal antibody clone Jmab-136, light chain cDNA.

XX

KW Human; antirheumatic; antiarthritic; antidiabetic; antipsoriatic;
KW antiallergic; antiulcer; neuroprotective; antithyroid; vasotropic;
KW immunosuppressive; dermatological; antiinflammatory; hepatotropic;
KW activation inducible lymphocyte immunomodulatory molecule; AILIM;
KW monoclonal antibody; allergy; rheumatoid arthritis; diabetes mellitus;
KW multiple sclerosis; autoimmune thyroiditis; psoriasis; hepatitis;
KW allergic contact-type dermatitis; chronic inflammatory dermatosis;
KW systemic lupus erythematosus; autoimmune disorder; inflammation; ss;
KW graft versus host reaction; immune rejection; intestinal immunity;
KW ulcerative colitis; pneumonia; nephritis; vasculitis; pancreatitis.

XX

OS Homo sapiens.

XX

PN WO200187981-A2.

XX

PD 22-NOV-2001.

XX

PF 15-MAY-2001; 2001WO-JP004035.

XX

PR 18-MAY-2000; 2000JP-00147116.

PR 30-MAR-2001; 2001JP-00099508.

XX

PA (NISB) JAPAN TOBACCO INC.

XX

PI Tsuji T, Tezuka K, Hori N;

XX

DR WPI; 2002-075313/10.

DR P-PSDB; AAU74297.

XX

PT New human monoclonal antibody that binds to activation inducible

PT lymphocyte immunomodulatory molecule, useful for treating rheumatoid

PT arthritis, multiple sclerosis and inflammation.

XX

PS Claim 45; Page 267-270; 300pp; English.

XX

The invention relates to a novel human antibody (I), preferably a human monoclonal antibody which binds to an activation inducible lymphocyte immunomodulatory molecule (AILIM). (I) is useful for modulating signal transduction into a cell mediated by AILIM, for modulating proliferation of AILIM-expressing cells, for modulating production of a cytokine from AILIM-expressing cells, and for inducing antibody-dependent cytotoxicity against AILIM-expressing cells and/or immune cytolysis or apoptosis of AILIM-expressing cells. (I) is useful for treating, preventing or prophylaxis of delayed type allergy. (I) is useful for treating and preventing various diseases associated with AILIM-mediated costimulatory transduction, and for inhibiting the onset and/or advancement of the diseases. (I) is useful for suppression, prevention and/or treatment of rheumatoid arthritis, multiple sclerosis, autoimmune thyroiditis, allergic contact-type dermatitis, chronic inflammatory dermatosis, systemic lupus erythematosus, insulin-dependent diabetes mellitus, psoriasis, autoimmune or allergic disorders, inflammation, graft versus host reaction, graft versus host disease, immune rejection, disorders caused by abnormal intestinal immunity, specifically inflammatory intestinal disorders such as ulcerative colitis, pneumonia, hepatitis, nephritis, vasculitis, and pancreatitis. (I) induces no serious immunorejection due to antigenicity to human, i.e., human anti-mouse antigenicity (HAMA) in a host. AAS99444-AAS99477 represent anti-human AILIM monoclonal antibody coding sequences and PCR primers of the invention.

XX

SQ Sequence 974 BP; 246 A; 282 C; 232 G; 214 T; 0 U; 0 Other;

Query Match 93.8%; Score 364; DB 6; Length 974;

Best Local Similarity 96.1%; Pred. No. 4.7e-103;

Matches 373; Conservative 0; Mismatches 15; Indels 0; Gaps 0;

[illegible]

Db 339 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTC 398

QY 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388

Db 399 GGCCAAGGGACCAAGGTGGAAATCAAAC 426

RESULT 12

ABT31882

ID ABT31882 standard; DNA; 728 BP.

XX

AC ABT31882;

XX

DT 01-MAY-2003 (first entry)

XX

DE Anti-CD40 monoclonal antibody related DNA SEQ ID No 65.

XX

KW Antiallergic; haemostatic; immunomodulator; cytostatic; antibody;
KW human CD40; IL-12; LPS; lipopolysaccharide; IFNgamma; interferon gamma;
KW dendritic cell; high G28-5; CD95 expression; high G28-5; B cell line;
KW immunoactivator; anti-tumour agent; immunosuppressant; allergy;
KW autoimmune disease; coagulation factor VIII inhibitor; anti-CD40; gene;
KW ds.

XX

OS Unidentified.

XX

PN WO200288186-A1.

XX

PD 07-NOV-2002.

XX

PF 26-APR-2002; 2002WO-JP004292.

XX

PR 27-APR-2001; 2001WO-US013672.

PR 11-MAY-2001; 2001JP-00142482.

PR 05-CCT-2001; 2001JP-00310535.

PR 26-OCT-2001; 2001US-00040244.

XX

PA (KIRI) KIRIN BEER KK.

XX

PI Mikayama T, Yoshida H, Force WR, Chen X, Takahashi N;

XX

DR WPI; 2003-120463/11.

DR P-PSDB; ABJ36940.

XX

PT Anti-CD40 monoclonal antibody with antagonist/agonist activity to CD40,
PT or functional fragment, is useful in the treatment of e.g. autoimmune
PT diseases or cancer.

XX

PS Claim 16; Page 59-60; 94pp; Japanese.

XX

CC The invention relates to an antibody to human CD40, or its functional
CC fragment, has at least one of the following properties: acting on
CC dendritic cells to produce IL-12 in the presence of LPS
CC (lipopolysaccharide) and IFNgamma (interferon gamma); acting on dendritic
CC cells to activate maturity of the dendritic cells with high G28-5
CC antibody; and activating CD95 expression with high G28-5 antibody against
CC B cell line. Such antibodies or functional fragments can be used as

CC immunoactivators, anti-tumour agents, immunosuppressants, and as remedies
CC for autoimmune diseases, allergy or coagulation factor VIII inhibitors
CC syndrome. This polynucleotide sequence represents a coding DNA sequence
CC relating to the anti-CD40 monoclonal antibody of the invention

XX

SQ Sequence 728 BP; 183 A; 201 C; 195 G; 149 T; 0 U; 0 Other;

Query Match 93.4%; Score 362.4; DB 8; Length 728;
Best Local Similarity 95.9%; Pred. No. 1.3e-102;
Matches 372; Conservative 0; Mismatches 16; Indels 0; Gaps 0;

```
Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
      |||
Db      59 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 118

Qy     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
      |||
Db     119 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGA 178

Qy     121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
      |||
Db     179 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAG 238

Qy     181 AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
      |||
Db     239 AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 298

Qy     241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
      |||
Db     299 CCATCAAGGTTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 358

Qy     301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
      |||
Db     359 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTC 418

Qy     361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
      |||
Db     419 GGCCAAGGGACCAAGGTGGAGATCAAAC 446
```

RESULT 13

ADM47072

ID ADM47072 standard; DNA; 711 BP.

XX

AC ADM47072;

XX

DT 03-JUN-2004 (first entry)

XX

DE Mouse anti-human G-CSF antibody light chain gene.

XX

KW methylotroph yeast; mammalian sugar chain; OCH1; alpha-1;

KW 6-mannosyl transferase; alpha-1; 2-mannosidase;

KW orotidin-5'-phosphate decarboxylase; URA3;

KW phosphoribosyl-amino-imidazole succinocarboxamide synthase; ADE1;

KW imidazole-glycerol-phosphate dehydratase; HIS3;

KW 3-isopropyl malate dehydrogenase; LEU2; proteinase A; proteinase B; PRB1;

KW PEP4; YPS1; KTR1; MNN9; AOX; GAPDH; mannosyl transferase;

Db	126	 CATCACTTGTCTGGGCGAGTCAGGTTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC	185
Qy	186	AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Db	186	 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Qy	246	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Db	246	 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Qy	306	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA	365
Db	306	 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCCGACGTTTCGGCCA	365
Qy	366	GGGGACCAAGCTGGAGATCAAAC	388
Db	366	 AGGGACCAAGGTGGAAATCAAAC	388

RESULT 14

AAV39241

ID AAV39241 standard; DNA; 409 BP.

XX

AC AAV39241;

XX

DT 18-DEC-1998 (first entry)

XX

DE Functional kappa transcript isolated from transgenic cell line 4D1.

XX

KW Transgenic animal; human heterologous antibody; transgene;
 KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
 KW autoimmune reaction; inflammatory response; transplant rejection;
 KW acid induced lung injury; acute adult respiratory distress syndrome;
 KW ARDS; vasculitis; septic shock; allergic reaction; asthma;
 KW cystic fibrosis; ss.

XX

OS Synthetic.

OS Homo sapiens.

OS Mus sp.

XX

PN WO9824884-A1.

XX

PD 11-JUN-1998.

XX

PF 01-DEC-1997; 97WO-US021803.

XX

PR 02-DEC-1996; 96US-00758417.

XX

PA (GENP-) GENPHARM INT.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1998-333306/29.

XX

PT Hybridoma producing antibody specific for interleukin-8 - used to prevent
 PT efflux of neutrophils from vasculature, and treat reperfusion injury.

XX
 PS Example 41; Page 304-305; 452pp; English.
 XX
 CC AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
 CC antibody. The sequences are isolated from 5 different transgenic mouse
 CC hybridoma cell lines. The specification describes transgenic non-human
 CC animals, especially a mouse, which are capable of producing a human
 CC heterologous antibodies of multiple isotypes by undergoing isotype
 CC switching. The transgenic animals have human heavy and light chain
 CC transgenes. The transgenes are capable of functionally rearranging a
 CC heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
 CC recombination. The transgenes include a heavy chain transgene comprising
 CC at least one V, D and J gene segment, and one constant region gene
 CC segment. The immunoglobulin (Ig) light chain transgene comprises at least
 CC one V and J gene segment and one constant region gene segment. The gene
 CC segments are heterologous to the transgenic animal. The antibody can be
 CC used to prevent efflux of neutrophils from vasculature. It can also be
 CC used to treat reperfusion injury. CD4 binding antibodies are used to
 CC reduce undesirable autoimmune reactions, inflammatory responses and
 CC rejection of transplanted organs. The anti-IL-8 antibodies can reduce
 CC tissue damage and prolong survival in animal models of acute adult
 CC respiratory distress syndrome (ARDS) and acid induced lung injury. The
 CC anti-IL-8 antibodies can also be used for the treatment of vasculitis,
 CC septic shock, allergic reactions (e.g. asthma) and cystic fibrosis
 XX
 SQ Sequence 409 BP; 95 A; 112 C; 102 G; 100 T; 0 U; 0 Other;

Query Match 90.5%; Score 351.2; DB 2; Length 409;
 Best Local Similarity 94.1%; Pred. No. 3.3e-99;
 Matches 365; Conservative 0; Mismatches 23; Indels 0; Gaps 0;

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Qy     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Db     61 AGATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGA 120

Qy    121 GTCACCATCACTTGTTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Db    121 GTCACCATCACTTGTTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 180

Qy    181 AAACCAGGGAAAGCCCCCTAAGTCCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
      |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db    181 AAACCAGAGAAAGCCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTC 240

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Qy    361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388

RESULT 15

AAT73443

ID AAT73443 standard; DNA; 439 BP.

XX

AC AAT73443;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-OCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1997-235888/21.

XX

PT Novel anti-CD4 antibody produced by transgenic mice - used in the

PT treatment of auto-immune disease etc.

XX

PS Claim 44; Page 256; 396pp; English.

XX

CC A novel composition has been developed which comprises an immunoglobulin
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC -1 for binding to a predetermined human antigen. The present sequence
CC represents a human light chain variable region partial nucleotide
CC sequence, 4D1 kappa, which encodes an amino acid sequence from a claimed
CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC may be used in therapeutic and diagnostic applications, especially for
CC the treatment of human diseases. These antibodies reduce activity of CD4
CC cells and reduce undesirable autoimmune reactions, inflammatory response
CC and transplant rejection. Transgenic animals are capable of producing
CC heterologous antibodies of multiple isotypes by undergoing isotype
CC switching. These animals produce a first Ig type that is necessary for
CC antigen-stimulated B-cell maturation and can switch to encode and produce
CC one or more subsequent heterologous isotypes

XX

SQ Sequence 439 BP; 100 A; 122 C; 106 G; 111 T; 0 U; 0 Other;

Query Match 90.5%; Score 351.2; DB 2; Length 439;

Best Local Similarity 94.1%; Pred. No. 3.4e-99;

Matches 365; Conservative 0; Mismatches 23; Indels 0; Gaps 0;

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Db      1 ATGGACATGGAGTTCCCCGTTTCCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCC 60

Qy     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
        |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  ||
Db     61 AGATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGA 120

Qy    121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
        |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  ||
Db    121 GTCACCATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 180

Qy    181 AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
        |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  ||
Db    181 AAACCAGAGAAAGCCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
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Db    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy    301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Db    301 CAGCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTT 360

Qy    361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db    361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Search completed: December 2, 2004, 13:05:55

Job time : 303.42 secs

GenCore version 5.1.6

Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:03 ; Search time 56.6692 Seconds
(without alignments)
4866.596 Million cell updates/sec

Title: US-08-728-463B-206
Perfect score: 388
Sequence: 1 ATGGACATGATGGTCCCCGC.....GACCAAGCTGGAGATCAAAC 388

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 824507 seqs, 35539441 residues

Total number of hits satisfying chosen parameters: 1649014

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result		%					
No.	Score	Query Match	Length	DB	ID	Description	
1	388	100.0	388	3	US-09-042-353-358	Sequence 358, App	
2	388	100.0	388	3	US-08-758-417A-206	Sequence 206, App	
3	368.6	95.0	420	3	US-09-042-353-420	Sequence 420, App	
4	368.6	95.0	420	3	US-08-758-417A-220	Sequence 220, App	
5	368.6	95.0	3819	3	US-09-042-353-393	Sequence 393, App	
6	368.6	95.0	3819	3	US-08-758-417A-243	Sequence 243, App	
7	351.2	90.5	439	3	US-09-042-353-360	Sequence 360, App	
8	351.2	90.5	439	3	US-08-758-417A-208	Sequence 208, App	
9	335.6	86.5	384	1	US-08-259-372A-13	Sequence 13, Appl	
10	335.6	86.5	384	1	US-08-468-671-13	Sequence 13, Appl	
11	335.2	86.4	390	2	US-08-646-367-2	Sequence 2, Appli	
12	325.6	83.9	714	4	US-09-472-087-62	Sequence 62, Appl	
13	324	83.5	1066	1	US-08-157-101A-4	Sequence 4, Appli	
14	319.2	82.3	19040	4	US-09-343-485A-3	Sequence 3, Appli	
15	318.2	82.0	387	3	US-08-803-085-3	Sequence 3, Appli	
16	313.4	80.8	387	1	US-08-217-918-1	Sequence 1, Appli	
17	298.8	77.0	705	1	US-08-488-376-16	Sequence 16, Appl	
18	298.8	77.0	705	2	US-08-634-223-16	Sequence 16, Appl	
19	298.8	77.0	705	2	US-08-634-224-16	Sequence 16, Appl	
20	298.8	77.0	705	2	US-08-634-400-16	Sequence 16, Appl	
21	298.8	77.0	705	2	US-08-635-878-16	Sequence 16, Appl	
22	298.8	77.0	705	2	US-08-770-057-16	Sequence 16, Appl	
23	298.8	77.0	705	3	US-09-335-697B-16	Sequence 16, Appl	
24	298.8	77.0	705	4	US-09-335-697B-16	Sequence 16, Appl	
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c 26	292.8	75.5	371	4	US-09-389-681-187	Sequence 187, App	
c 27	292.8	75.5	371	4	US-09-620-405B-187	Sequence 187, App	
c 28	292.8	75.5	371	4	US-09-339-338-187	Sequence 187, App	
c 29	292.8	75.5	371	4	US-09-433-826B-187	Sequence 187, App	
c 30	292.8	75.5	371	4	US-09-604-287A-187	Sequence 187, App	
c 31	292.8	75.5	371	4	US-09-834-759-187	Sequence 187, App	
c 32	292.8	75.5	371	4	US-09-590-751A-187	Sequence 187, App	
33	283.6	73.1	990	4	US-09-800-729-79	Sequence 79, Appl	
34	280.2	72.2	381	2	US-08-621-751A-5	Sequence 5, Appli	
35	279.2	72.0	708	1	US-08-488-376-18	Sequence 18, Appl	

36	279.2	72.0	708	2	US-08-634-223-18	Sequence 18, Appl
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38	279.2	72.0	708	2	US-08-634-400-18	Sequence 18, Appl
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43	279.2	72.0	708	4	US-09-740-002-18	Sequence 18, Appl
44	277	71.4	321	3	US-09-240-274-109	Sequence 109, App
45	275	70.9	847	1	US-08-053-131-184	Sequence 184, App

ALIGNMENTS

RESULT 1

US-09-042-353-358

; Sequence 358, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/042,353

; FILING DATE: 13-MAR-1998

; CLASSIFICATION: 800

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/810,279

; FILING DATE: 17-DEC-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/853,408

; FILING DATE: 18-MAR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/904,068

; FILING DATE: 23-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 358:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 388 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-358

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Query Match          100.0%;  Score 388;  DB 3;  Length 388;
Best Local Similarity 100.0%;  Pred: No. 1.4e-108;
Matches 388;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps 0;

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Db      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60

Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

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Db      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
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Db      121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
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Db      241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
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Db      301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
Qy      361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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RESULT 2

US-08-758-417A-206

; Sequence 206, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992

ATTORNEY/AGENT INFORMATION:

; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US

TELECOMMUNICATION INFORMATION:

; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300

; INFORMATION FOR SEQ ID NO: 206:

SEQUENCE CHARACTERISTICS:

; LENGTH: 388 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear

; MOLECULE TYPE: DNA

; SEQUENCE DESCRIPTION: SEQ ID NO: 206:

US-08-758-417A-206

Query Match 100.0%; Score 388; DB 3; Length 388;
Best Local Similarity 100.0%; Pred. No. 1.4e-108;
Matches 388; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC	60
Db	1	ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC	60
Qy	61	AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA	120
Db	61	AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA	120
Qy	121	GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT	180
Db	121	GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT	180
Qy	181	AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGCGGGTC	240
Db	181	AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGCGGGTC	240
Qy	241	CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG	300
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Qy 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388

Db 361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388

RESULT 3

US-09-042-353-420

; Sequence 420, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/042,353

; FILING DATE: 13-MAR-1998

; CLASSIFICATION: 800

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/810,279

; FILING DATE: 17-DEC-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/853,408

; FILING DATE: 18-MAR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/904,068

; FILING DATE: 23-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
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; FILING DATE: 09-MAR-1994
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; APPLICATION NUMBER: US 08/352,322
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; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 420:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 420 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-420

```

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Query Match          95.0%; Score 368.6; DB 3; Length 420;
Best Local Similarity 97.7%; Pred. No. 1.1e-102;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

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Qy      6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
        |||
Db     12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
        |||

Qy     66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
        |||
Db     72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        |||

Qy    126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
        |||
Db    132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
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Qy    186 AGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

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Db	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Qy	246	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Db	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Qy	306	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA	365
Db	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Qy	366	GGGGACCAAGCTGGAGATCAAAC	388
Db	372	GGGAACCAAGCTGGAGATCAAAC	394

RESULT 4

US-08-758-417A-220

; Sequence 220, Application US/08758417A

; Patent No. 6300129

GENERAL INFORMATION:

APPLICANT: Lonberg, Nils

Kay, Robert M.

TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
Producing Heterologous Antibodies

NUMBER OF SEQUENCES: 417

CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew LLP

STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

STATE: California

; COUNTRY: USA

ZIP: 94111-3834

COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk

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;
;      COMPUTER: IBM PC compatible

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OPERATING SYSTEM: PC-DOS/MS-DOS

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; SOFTWARE: PatentIn Release #1.0, Version #1.30

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; CURRENT APPLICATION DATA:

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APPLICATION NUMBER: US/08/758,417A

FILING DATE: 02-Dec-1996

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/728,463

FILING DATE: 10-OCT-1996

APPLICATION NUMBER: US 08/544,404

FILING DATE: 10-OCT-1995

APPLICATION NUMBER: US 08/352,322

FILING DATE: 07-DEC-1994

APPLICATION NUMBER: US 08/209,741

FILING DATE: 09-MAR-1994

APPLICATION NUMBER: US 08/165,699

i FILING DATE: 10-DEC-1993

APPLICATION NUMBER: US 08/161,739

FILING DATE: 03-DEC-1993

APPLICATION NUMBER: US 08/155,301

;
FILING DATE: 18-NOV-1993

```

; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 220:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 420 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 220:
US-87-758-417A-220

```

Query Match 95.0%; Score 368.6; DB 3; Length 420;
Best Local Similarity 97.7%; Pred. No. 1.1e-102;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy	6	CATGATGGTCCCCGCTCAGCTCCTCGGGGTCCTGTGCTCTGGTTCCCAGGTTCCAGATG	65
Db	12	CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGTGCTCTGGTTCCCAGGTTCCAGATG	71
Qy	66	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	125
Db	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Qy	126	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	185
Db	132	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Qy	186	AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Db	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Qy	246	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Db	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Qy	306	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA	365
Db	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Qy	366	GGGGACCAAGCTGGAGATCAAAC	388
Db	372	GGGAACCAAGCTGGAGATCAAAC	394

US-09-042-353-393
; Sequence 393, Application US/09042353
; Patent No. 6255458
; GENERAL INFORMATION:
; APPLICANT: Lonberg, Nils
; APPLICANT: Kay, Robert M.
; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
; TITLE OF INVENTION: Producing Heterologous Antibodies
; NUMBER OF SEQUENCES: 421
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,353
; FILING DATE: 13-MAR-1998
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/810,279
; FILING DATE: 17-DEC-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,408
; FILING DATE: 18-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/904,068
; FILING DATE: 23-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322


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Db      2745 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 2804
Qy      366 GGGGACCAAGCTGGAGATCAAAC 388
Db      2805 GGGAACCAAGCTGGAGATCAAAC 2827

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RESULT 6

US-08-758-417A-243

; Sequence 243, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; ATTORNEY/AGENT INFORMATION:

; NAME: Serafini, Andrew T.

```

;      REGISTRATION NUMBER: 41,303
;      REFERENCE/DOCKET NUMBER: 014643-009030US
;      TELECOMMUNICATION INFORMATION:
;      TELEPHONE: (415) 576-0200
;      TELEFAX: (415) 576-0300
;      INFORMATION FOR SEQ ID NO: 243:
;      SEQUENCE CHARACTERISTICS:
;      LENGTH: 3819 base pairs
;      TYPE: nucleic acid
;      STRANDEDNESS: single
;      TOPOLOGY: linear
;      MOLECULE TYPE: DNA
;      SEQUENCE DESCRIPTION: SEQ ID NO: 243:
US-08-758-417A-243

```

Query Match 95.0%; Score 368.6; DB 3; Length 3819;
Best Local Similarity 97.7%; Pred. No. 2.5e-102;
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy	6	CATGATGGTCCCCGCTCAGCTCCTCGGGCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	65
Db	2445	CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	2504
Qy	66	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	125
Db	2505	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	2564
Qy	126	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	185
Db	2565	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	2624
Qy	186	AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Db	2625	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	2684
Qy	246	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Db	2685	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	2744
Qy	306	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA	365
Db	2745	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	2804
Qy	366	GGGGACCAAGCTGGAGATCAAAC	388
Db	2805	GGBAACCAAGCTGGAGATCAAAC	2827

RESULT 7

US-09-042-353-360

; Sequence 360, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

APPLICANT: Lonberg, Nils

APPLICANT: Kay, Robert M.

10; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

;
; NUMBER OF SEQUENCES: 421
;
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
;
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
;
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,353
; FILING DATE: 13-MAR-1998
; CLASSIFICATION: 800
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/810,279
; FILING DATE: 17-DEC-1991
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/853,408
; FILING DATE: 18-MAR-1992
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/904,068
; FILING DATE: 23-JUN-1992
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
;
; PRIOR APPLICATION DATA:

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; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 360:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 439 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-360

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RESULT 8

US-08-758-417A-208

; Sequence 208, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for

; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; ATTORNEY/AGENT INFORMATION:

; NAME: Serafini, Andrew T.

; REGISTRATION NUMBER: 41,303

; REFERENCE/DOCKET NUMBER: 014643-009030US

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (415) 576-0200

; TELEFAX: (415) 576-0300

; INFORMATION FOR SEQ ID NO: 208:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 439 base pairs

```

;          TYPE: nucleic acid
;          STRANDEDNESS: single
;          TOPOLOGY: linear
;          MOLECULE TYPE: DNA
;          SEQUENCE DESCRIPTION: SEQ ID NO: 208:
US-08-758-417A-208

```

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Query Match      90.5%; Score 351.2; DB 3; Length 439;
Best Local Similarity 94.1%; Pred. No. 2.3e-97;
Matches 365; Conservative 0; Mismatches 23; Indels 0; Gaps 0;

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Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
        |||||
Db      1 ATGGACATGGAGTTCCCCGTTCCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCC 60

Qy     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
        |||||
Db     61 AGATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGA 120

Qy    121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
        |||||
Db    121 GTCACCATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 180

Qy    181 AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
        |||||
Db    181 AAACCAGAGAAAGCCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
        |||||
Db    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

Qy    301 CAGCCTGAAGATTTTGCACCTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
        |||||
Db    301 CAGCCTGAAGATTTTGCACCTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTT 360

Qy    361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
        |||||
Db    361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388

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RESULT 9

US-08-259-372A-13

; Sequence 13, Application US/08259372A

; Patent No. 5565354

; GENERAL INFORMATION:

; APPLICANT: Ostberg, Lars G.

; TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL

; TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN

; NUMBER OF SEQUENCES: 16

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: CA

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/259,372A
; FILING DATE: 14-JUN-1994
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/871,426
; FILING DATE: 21-APR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/676,036
; FILING DATE: 27-MAR-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/538,796
; FILING DATE: 15-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/192,754
; FILING DATE: 11-MAY-1988
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 06/925,196
; FILING DATE: 31-OCT-1986
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 06/904,517
; FILING DATE: 05-SEP-1986
; ATTORNEY/AGENT INFORMATION:
; NAME: Smith, William M.
; REGISTRATION NUMBER: 30,223
; REFERENCE/DOCKET NUMBER: 11823-50-7
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 326-2400
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 384 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: unknown
; TOPOLOGY: unknown
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; CELL TYPE: Hybridoma
; CELL LINE: ZM1-2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..384
US-08-259-372A-13

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Query Match          86.5%;  Score 335.6;  DB 1;  Length 384;
Best Local Similarity 92.4%;  Pred. No. 1.2e-92;
Matches 353;  Conservative 0;  Mismatches 29;  Indels 0;  Gaps 0;

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Qy      7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
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Db      1 ATGAGGCCCGTCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCTCCAGGTTCCAGATGC 60
Qy      67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTGGGAGACAGAGTCACC 120
Qy     127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 GTCACCTTGTCGGGCGAGTCAGGGTATTAGCAGTTGGTTAGCCTGGTATCAGCAGAAACCA 180
Qy     187 GGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 GGGAAAGCCCCCTAAGCTCCTGATCCATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 240
Qy     247 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
        ||||||| |||||||||||||||||||||||||||||||||||||||||||||
Db     241 AGGTTCATCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCACCAGCCTGCAGGCT 300
Qy     307 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
        ||||||||||||||| ||||||||||||||||||| |||| ||||| ||||| |||
Db     301 GAAGATTTTGCAACCTACTATTGTCAACAGGCTGACAGTCTCCCTTTTACTTTTCGGCGGA 360
Qy     367 GGGACCAAGCTGGAGATCAAAC 388
        ||||||||| |||| |||||||
Db     361 GGGACCAAGGTGGACTTCAAAC 382

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RESULT 10

US-08-468-671-13

; Sequence 13, Application US/08468671

; Patent No. 5648077

; GENERAL INFORMATION:

; APPLICANT: Ostberg, Lars G.

; TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL

; TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN

; NUMBER OF SEQUENCES: 16

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: CA

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/468,671

; FILING DATE: 06-JUN-1995

; CLASSIFICATION: 424

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/259,372

; FILING DATE: 14-JUN-1994

; APPLICATION NUMBER: US 07/871,426

; FILING DATE: 21-APR-1992


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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/676,036
; FILING DATE: 27-MAR-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/538,796
; FILING DATE: 15-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/192,754
; FILING DATE: 11-MAY-1988
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 06/925,196
; FILING DATE: 31-OCT-1986
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 06/904,517
; FILING DATE: 05-SEP-1986
; ATTORNEY/AGENT INFORMATION:
; NAME: Smith, William M.
; REGISTRATION NUMBER: 30,223
; REFERENCE/DOCKET NUMBER: 11823-50-7
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 326-2400
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 384 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: unknown
; TOPOLOGY: unknown
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; CELL TYPE: Hybridoma
; CELL LINE: ZM1-2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..384
US-08-468-671-13

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Query Match          86.5%; Score 335.6; DB 1; Length 384;
Best Local Similarity 92.4%; Pred. No. 1.2e-92;
Matches 353; Conservative 0; Mismatches 29; Indels 0; Gaps 0;

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Qy      7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
      ||||| | | ||||||| | | ||||||| | | ||||||| | | ||||||| | | ||||||| | |
Db      1 ATGAGGCCCGTCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60

Qy     67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
      ||||||| | | ||||||| | | ||||||| | | ||||||| | | ||||||| | | ||||||| | |
Db     61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTGGGAGACAGAGTCACC 120

Qy    127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
      ||||||| | | ||||||| | | ||||||| | | ||||||| | | ||||||| | | ||||||| | |
Db    121 GTCACCTTGTCGGGCGAGTCAGGGTATTAGCAGTTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy    187 GGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246

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; TOPOLOGY: linear
US-08-646-367-2

Query Match 86.4%; Score 335.2; DB 2; Length 390;
Best Local Similarity 91.5%; Pred. No. 1.6e-92;
Matches 355; Conservative 0; Mismatches 33; Indels 0; Gaps 0;

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Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCTCAGGTTCC 60
        |||
Db      1 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCTCAGGTTCC 60

Qy     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
        |||
Db     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120

Qy    121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
        |||
Db    121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGTTGGTTAGCCTGGTATCAGCAG 180

Qy    181 AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
        |||
Db    181 AAACCAGGAAAGGCCCGAAGCTCTTGATCTATGAAGCATCCAATTTGGAAACTGGGGTC 240

Qy    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
        |||
Db    241 CCATCAAGATTTCAGCGGCAGTGGATCTGGGTTCAGATTTACCCCTCACCATCAGCAGCCTG 300

Qy    301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
        |||
Db    301 CAGCCTGAAGATTTTGCAACTTATTATTGTCAACAGACTAGCAGTTTCTCCTCAGTTTC 360

Qy    361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
        |||
Db    361 GGCGGCGGGACCAAGGTGGAGCACAAAC 388
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RESULT 12

US-09-472-087-62

; Sequence 62, Application US/09472087

; Patent No. 6682736

; GENERAL INFORMATION:

; APPLICANT: HANSON, DOUGLAS C.

; APPLICANT: NEVEU, MARK J.

; APPLICANT: MUELLER, EILLEN E.

; APPLICANT: HANKE, JEFFREY H.

; APPLICANT: GILMAN, STEVEN C.

; APPLICANT: DAVIS, C. GEOFFREY

; APPLICANT: CORVALAN, JOSE R.

; TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODIES TO CTLA-4

; FILE REFERENCE: ABX-PF1

; CURRENT APPLICATION NUMBER: US/09/472,087

; CURRENT FILING DATE: 1999-12-23

; PRIOR APPLICATION NUMBER: 60/113,647

; PRIOR FILING DATE: 1998-12-23

; NUMBER OF SEQ ID NOS: 147

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 62

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;   LENGTH: 714
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-472-087-62
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Query Match 83.9%; Score 325.6; DB 4; Length 714;
Best Local Similarity 89.9%; Pred. No. 1.7e-89;
Matches 349; Conservative 0; Mismatches 39; Indels 0; Gaps 0;

Qy	1	ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCTCCAGGTTCC	60
Db	1	ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTACTCTGGCTCCGAGGTGCC	60
Qy	61	AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA	120
Db	61	AGATGTGACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTAGGAGACAGA	120
Qy	121	GTCACCATCACCTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT	180
Db	121	GTCACCATCACCTTGCCGGGCAAGTCAGAGCATTAAACAGCTATTTAGATTGGTATCAGCAG	180
Qy	181	AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC	240
Db	181	AAACCAGGGAAAGCCCCCTAAACTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC	240
Qy	241	CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG	300
Db	241	CCATCAAGGTTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGTCTG	300
Qy	301	CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT	360
Db	301	CAACCTGAAGATTTTGCAACTTACTACTGTCAACAGTATTACAGTACTCCATTCACTTTC	360
Qy	361	GGCCAGGGGACCAAGCTGGAGATCAAAC	388
Db	361	GGCCCTGGGACCAAAGTGGAATCAAAC	388

RESULT 13

US-08-157-101A-4

; Sequence 4, Application US/08157101A

; Patent No. 5808032

; GENERAL INFORMATION:

APPLICANT: KURIHARA, TATSUYA

APPLICANT: MATSUKURA, SHIGEKAZU

APPLICANT: TSURUOKA, NOBUO

APPLICANT: ARIMA, KENJI

APPLICANT: NISHIHARA, TATSURO

TITLE OF INVENTION: ANTI-HBs ANTIBODY GENES AND EXPRESSION

; TITLE OF INVENTION: PLASMIDS THEREFOR

: NUMBER OF SEQUENCES: 9

CORRESPONDENCE ADDRESS:

ADDRESSEE: PILLSBURY, MADISON & SUTRO

STREET: 1100 NEW YORK AVENUE, N.W.

; CITY: WASHINGTON

; STATE: D.C.

COUNTRY: USA

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; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/157,101A
; FILING DATE: 05-APR-1994
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: TITUS, MARLANA K
; REGISTRATION NUMBER: 35843
; REFERENCE/DOCKET NUMBER: 9437/204199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-861-3711
; TELEFAX: 202-822-0944
; TELEX: 6714627 CUCH
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1066 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-157-101A-4

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Query Match          83.5%; Score 324; DB 1; Length 1066;
Best Local Similarity 89.7%; Pred. No. 5.9e-89;
Matches 348; Conservative 0; Mismatches 40; Indels 0; Gaps 0;

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Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
      |||
Db      33 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTGCC 92

Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
      || ||
Db      93 AGGTGTGACATCCAGATGACCCAGTCTCCATCTGCCATGGCTGCATCTGTAGGAGACAGA 152

Qy     121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
      |||
Db     153 GTCACCATCACTTGTCTGGGCGAGTCAGGGCATTGGCAATTATTTAGTCTGGTTTCAGCAG 212

Qy     181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTTC 240
      |||
Db     213 AAACCAGGGAAAGTCCCTAAGCGCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTTC 272

Qy     241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
      |||
Db     273 CCATCGAGGTTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACAATCAGCAGACTG 332

Qy     301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Db     333 CAGCCTGAAGATTTTGCAACTTATTACTGTCTACATCATAATAATTACCCGCTAAGTTTC 392

Qy     361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
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Db 393 GGCGGAGGGACCAAGGTGGAGATCAAAC 420

RESULT 14

US-09-343-485A-3

; Sequence 3, Application US/09343485A

; Patent No. 6413777

; GENERAL INFORMATION:

; APPLICANT: REFF, MITCHELL R.

; APPLICANT: BARNETT, RICHARD S.

; APPLICANT: MCLACHLAN, KAREN R.

; TITLE OF INVENTION: NOVEL METHOD FOR INTEGRATING GENES AT SPECIFIC SITES IN

; TITLE OF INVENTION: MAMMALIAN CELLS VIA HOMOLOGOUS RECOMBINATION AND

; TITLE OF INVENTION: VECTORS FOR ACCOMPLISHING THE SAME

; FILE REFERENCE: 037003-0275807

; CURRENT APPLICATION NUMBER: US/09/343,485A

; CURRENT FILING DATE: 1999-06-30

; PRIOR APPLICATION NUMBER: 09/023,715

; PRIOR FILING DATE: 1998-02-13

; PRIOR APPLICATION NUMBER: 08/819,866

; PRIOR FILING DATE: 1997-03-14

; NUMBER OF SEQ ID NOS: 3

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 3

; LENGTH: 19040

; TYPE: DNA

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA

; OTHER INFORMATION: referred to as "Mandy"

US-09-343-485A-3

Query Match 82.3%; Score 319.2; DB 4; Length 19040;
Best Local Similarity 88.9%; Pred. No. 4.8e-87;
Matches 345; Conservative 0; Mismatches 43; Indels 0; Gaps 0;

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Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
      |||
Db 7545 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTTCTGCTCTGGCTCCCAGGTGCC 7604

Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
      |||
Db 7605 AGATGTGACATCCAGATGACCCAGTCTCCATCTTCCCTGTCTGCATCTGTAGGGGACAGA 7664

Qy     121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
      |||
Db 7665 GTCACCATCACTTGCAGGGCAAGTCAGGACATTAGGTATTATTTAAATTGGTATCAGCAG 7724

Qy     181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
      |||
Db 7725 AAACCAGGAAAAGCTCCTAAGCTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 7784

Qy     241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
      |||
Db 7785 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGAGTTCACTCTCACCGTCAGCAGCCTG 7844

Qy     301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
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Db      7845 CAGCCTGAAGATTTTGC GACTTATTACTGTCTACAGGTTTATAGTACCCCTCGGACGTTTC 7904
Qy      361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
Db      7905 GGCCAAGGGACCAAGGTGGAAATCAAAC 7932

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RESULT 15

US-08-803-085-3

; Sequence 3, Application US/08803085

; Patent No. 6011138

; GENERAL INFORMATION:

; APPLICANT: REFF, Mitchell E.

; APPLICANT: KLOETZER, William S.

; APPLICANT: NAKAMURA, Takehiko

; TITLE OF INVENTION: GAMMA-1 ANTI-HUMAN CD23 MONOCLONAL

; TITLE OF INVENTION: ANTIBODIES AND USE THEREOF AS THERAPEUTICS

; NUMBER OF SEQUENCES: 35

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS

; STREET: P.O. Box 1404

; CITY: Alexandria

; STATE: Virginia

; COUNTRY: United States

; ZIP: 22313-1404

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/803,085

; FILING DATE: 20-FEB-1997

; CLASSIFICATION: 424

; ATTORNEY/AGENT INFORMATION:

; NAME: Teskin, Robin L.

; REGISTRATION NUMBER: 35,030

; REFERENCE/DOCKET NUMBER: 012712-353

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (703) 836-6620

; TELEFAX: (703) 836-2021

; INFORMATION FOR SEQ ID NO: 3:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 387 base pairs

; TYPE: nucleic acid

; STRANDEDNESS: single

; TOPOLOGY: linear

; MOLECULE TYPE: DNA (genomic)

; FEATURE:

; NAME/KEY: CDS

; LOCATION: 1..387

; FEATURE:

; NAME/KEY: mat_peptide

; LOCATION: 67..387

US-08-803-085-3

Query Match 82.0%; Score 318.2; DB 3; Length 387;
 Best Local Similarity 88.9%; Pred. No. 2.4e-87;
 Matches 344; Conservative 0; Mismatches 43; Indels 0; Gaps 0;

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Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
        |||
Db      1 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTTCTGCTCTGGCTCCCAGGTGCC 60

Qy     61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
        |||
Db     61 AGATGTGACATCCAGATGACCCAGTCTCCATCTTCCCTGTCTGCATCTGTAGGGGACAGA 120

Qy    121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
        |||
Db    121 GTCACCATCACTTGCAGGGCAAGTCAGGACATTAGGTATTATTTAAATTTGGTATCAGCAG 180

Qy    181 AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
        |||
Db    181 AAACCAGGAAAAGCTCCTAAGCTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 240

Qy    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
        |||
Db    241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGAGTTCACTCTCACCCTCAGCAGCCTG 300

Qy    301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
        |||
Db    301 CAGCCTGAAGATTTTGCAGACTTATTACTGTCTACAGGTTTATAGTACCCCTCGGACGTTT 360

Qy    361 GGCCAGGGGACCAAGCTGGAGATCAAA 387
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Db    361 GGCCAAGGGACCAAGGTGGAAATCAAA 387
  
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 Job time : 58.6692 secs

GenCore version 5.1.6
 Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 17:01:26 ; Search time 297.477 Seconds
 (without alignments)
 7166.911 Million cell updates/sec

Title: US-08-728-463B-206
 Perfect score: 388
 Sequence: 1 ATGGACATGATGGTCCCCGC.....GACCAAGCTGGAGATCAAAC 388

Scoring table: IDENTITY_NUC
 Gapop 10.0 , Gapext 1.0

Searched: 3694831 seqs, 2747406616 residues

Total number of hits satisfying chosen parameters: 7389662

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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- 2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
- 3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
- 4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
- 5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
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- 8: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
- 9: /cgn2_6/ptodata/1/pubpna/US09A_PUBCOMB.seq:*
- 10: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
- 11: /cgn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
- 12: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
- 13: /cgn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
- 14: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
- 15: /cgn2_6/ptodata/1/pubpna/US10C_PUBCOMB.seq:*
- 16: /cgn2_6/ptodata/1/pubpna/US10D_PUBCOMB.seq:*
- 17: /cgn2_6/ptodata/1/pubpna/US10E_PUBCOMB.seq:*
- 18: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
- 19: /cgn2_6/ptodata/1/pubpna/US11_NEW_PUB.seq:*
- 20: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
- 21: /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query		SUMMARIES			Description
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1	364	93.8	974	9	US-09-859-053-29	Sequence 29, Appl
2	364	93.8	974	17	US-10-625-105-29	Sequence 29, Appl
3	362.4	93.4	728	9	US-09-844-684-15	Sequence 15, Appl
4	362.4	93.4	728	14	US-10-040-244-15	Sequence 15, Appl
5	362.4	93.4	728	17	US-10-693-629-65	Sequence 65, Appl
6	359.2	92.6	716	9	US-09-844-684-13	Sequence 13, Appl
7	359.2	92.6	716	14	US-10-040-244-13	Sequence 13, Appl
8	350	90.2	752	17	US-10-684-109-83	Sequence 83, Appl
c 9	350	90.2	752	17	US-10-684-109-84	Sequence 84, Appl
10	348.4	89.8	705	15	US-10-292-088-23	Sequence 23, Appl
11	348.4	89.8	705	15	US-10-292-088-47	Sequence 47, Appl
12	338.8	87.3	381	16	US-10-309-762-111	Sequence 111, App
13	338.4	87.2	390	9	US-09-905-243-57	Sequence 57, Appl
14	335.6	86.5	384	15	US-10-389-221-10	Sequence 10, Appl
15	333.6	86.0	426	16	US-10-469-304-22	Sequence 22, Appl
16	332	85.6	1106	16	US-10-264-049-121	Sequence 121, App
17	331.6	85.5	387	9	US-09-905-243-25	Sequence 25, Appl
18	330.8	85.3	702	17	US-10-684-109-89	Sequence 89, Appl

c	19	330.8	85.3	702	17	US-10-684-109-90	Sequence 90, Appl
	20	330.8	85.3	702	17	US-10-684-109-107	Sequence 107, App
c	21	330.8	85.3	702	17	US-10-684-109-108	Sequence 108, App
	22	330.2	85.1	463	16	US-10-395-894-24	Sequence 24, Appl
	23	330.2	85.1	463	17	US-10-695-667-24	Sequence 24, Appl
	24	330.2	85.1	6082	16	US-10-395-894-10	Sequence 10, Appl
	25	330.2	85.1	6082	17	US-10-695-667-10	Sequence 10, Appl
	26	325.6	83.9	714	14	US-10-153-382-18	Sequence 18, Appl
	27	325.6	83.9	714	18	US-10-612-497-62	Sequence 62, Appl
	28	325.6	83.9	714	18	US-10-776-649-62	Sequence 62, Appl
	29	325.6	83.9	729	15	US-10-216-484-125	Sequence 125, App
	30	325.6	83.9	729	15	US-10-384-933-125	Sequence 125, App
	31	324.4	83.6	702	17	US-10-684-109-101	Sequence 101, App
c	32	324.4	83.6	702	17	US-10-684-109-102	Sequence 102, App
	33	323.8	83.5	463	16	US-10-395-894-20	Sequence 20, Appl
	34	323.8	83.5	463	17	US-10-695-667-20	Sequence 20, Appl
	35	323.8	83.5	6082	16	US-10-395-894-9	Sequence 9, Appli
	36	323.8	83.5	6082	17	US-10-695-667-9	Sequence 9, Appli
	37	321.4	82.8	772	16	US-10-264-049-2127	Sequence 2127, Ap
	38	321.2	82.8	702	17	US-10-684-109-95	Sequence 95, Appl
c	39	321.2	82.8	702	17	US-10-684-109-96	Sequence 96, Appl
	40	321.2	82.8	702	17	US-10-684-109-113	Sequence 113, App
c	41	321.2	82.8	702	17	US-10-684-109-114	Sequence 114, App
	42	320.8	82.7	698	9	US-09-844-684-11	Sequence 11, Appl
	43	320.8	82.7	698	14	US-10-040-244-11	Sequence 11, Appl
	44	320.8	82.7	698	17	US-10-693-629-61	Sequence 61, Appl
	45	319.4	82.3	402	14	US-10-158-646-56	Sequence 56, Appl

ALIGNMENTS

RESULT 1

US-09-859-053-29

; Sequence 29, Application US/09859053

; Patent No. US20020102658A1

; GENERAL INFORMATION:

; APPLICANT: Tsuji, Takashi

; APPLICANT: Tezuka, Katsunari

; APPLICANT: Hori, No. US20020102658A1uaki

; TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY AGAINST A

; TITLE OF INVENTION: COSTIMULATORY SIGNAL TRANSDUCTION MOLECULE AILIM AND

; TITLE OF INVENTION: PHARMACEUTICAL USE THEREOF

; FILE REFERENCE: 06501-079001

; CURRENT APPLICATION NUMBER: US/09/859,053

; CURRENT FILING DATE: 2001-05-16

; PRIOR APPLICATION NUMBER: JP 2001-99508

; PRIOR FILING DATE: 2001-03-30

; PRIOR APPLICATION NUMBER: JP 2000-147116

; PRIOR FILING DATE: 2000-05-18

; NUMBER OF SEQ ID NOS: 43

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 29

; LENGTH: 974

; TYPE: DNA

; ORGANISM: Homo sapiens

; FEATURE:

; NAME/KEY: 5'UTR
 ; LOCATION: (1)...(38)
 ; NAME/KEY: CDS
 ; LOCATION: (39)...(746)
 ; NAME/KEY: 3'UTR
 ; LOCATION: (750)...(974)
 ; NAME/KEY: sig_peptide
 ; LOCATION: (39)...(104)
 US-09-859-053-29

Query Match 93.8%; Score 364; DB 9; Length 974;
 Best Local Similarity 96.1%; Pred. No. 6e-105;
 Matches 373; Conservative 0; Mismatches 15; Indels 0; Gaps 0;

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Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
        |||
Db      39 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 98

Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
        |||
Db      99 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 158

Qy     121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
        |||
Db     159 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGGTTGTTAGCCTGGTATCAGCAG 218

Qy     181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
        |||
Db     219 AAACCAGGGAAAGCCCCTAAACTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 278

Qy     241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
        |||
Db     279 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 338

Qy     301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
        |||
Db     339 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTTC 398

Qy     361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
        |||
Db     399 GGCCAAGGGACCAAGGTGGAAATCAAAC 426
  
```

RESULT 2

US-10-625-105-29

; Sequence 29, Application US/10625105

; Publication No. US20040180052A1

GENERAL INFORMATION:

; APPLICANT: Tsuji, Takashi

; APPLICANT: Tezuka, Katsunari

; APPLICANT: Hori, Nobuaki

; TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY AGAINST A

; TITLE OF INVENTION: COSTIMULATORY SIGNAL TRANSDUCTION MOLECULE AILIM AND

; TITLE OF INVENTION: PHARMACEUTICAL USE THEREOF

; FILE REFERENCE: 06501-079001

; CURRENT APPLICATION NUMBER: US/10/625,105

; CURRENT FILING DATE: 2003-07-22

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; PRIOR APPLICATION NUMBER: US/09/859,053
; PRIOR FILING DATE: 2001-05-16
; PRIOR APPLICATION NUMBER: JP 2001-99508
; PRIOR FILING DATE: 2001-03-30
; PRIOR APPLICATION NUMBER: JP 2000-147116
; PRIOR FILING DATE: 2000-05-18
; NUMBER OF SEQ ID NOS: 43
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 29
; LENGTH: 974
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: 5'UTR
; LOCATION: (1)...(38)
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (39)...(746)
; FEATURE:
; NAME/KEY: 3'UTR
; LOCATION: (750)...(974)
; FEATURE:
; NAME/KEY: sig_peptide
; LOCATION: (39)...(104)
US-10-625-105-29
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Query Match          93.8%; Score 364; DB 17; Length 974;
Best Local Similarity 96.1%; Pred. No. 6e-105;
Matches 373; Conservative 0; Mismatches 15; Indels 0; Gaps 0;
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```
Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCAGGTTCC 60
        |||
Db      39 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCAGGTTCC 98

Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
        |||
Db      99 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 158

Qy     121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
        |||
Db     159 GTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGGTTGTTAGCCTGGTATCAGCAG 218

Qy     181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
        |||
Db     219 AAACCAGGGAAAGCCCCTAAACTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTC 278

Qy     241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
        |||
Db     279 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 338

Qy     301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
        |||
Db     339 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTT 398

Qy     361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
        |||
Db     399 GGCCAAGGGACCAAGGTGGAATCAAAC 426
```

RESULT 3

US-09-844-684-15

; Sequence 15, Application US/09844684

; Patent No. US20020142358A1

; GENERAL INFORMATION:

; APPLICANT: GEMINI SCIENCE, INC.

; APPLICANT: LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY

; TITLE OF INVENTION: HUMAN ANTI-CD40 ANTIBODIES AND METHODS OF MAKING SAME

; FILE REFERENCE: 21286/0276339

; CURRENT APPLICATION NUMBER: US/09/844,684

; CURRENT FILING DATE: 2001-04-27

; PRIOR APPLICATION NUMBER: US 60/200,601

; PRIOR FILING DATE: 2000-04-28

; NUMBER OF SEQ ID NOS: 15

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 15

; LENGTH: 728

; TYPE: DNA

; ORGANISM: Homo sapiens

US-09-844-684-15

Query Match 93.4%; Score 362.4; DB 9; Length 728;
Best Local Similarity 95.9%; Pred. No. 1.8e-104;
Matches 372; Conservative 0; Mismatches 16; Indels 0; Gaps 0;

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Qy      1 ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCAGGTTCC 60
      |||
Db      59 ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCAGGTTCC 118

Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
      |||
Db      119 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGA 178

Qy      121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
      |||
Db      179 GTCACCATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG 238

Qy      181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
      |||
Db      239 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 298

Qy      241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
      |||
Db      299 CCATCAAGGTTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 358

Qy      301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
      |||
Db      359 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTC 418

Qy      361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
      |||
Db      419 GGCCAAGGGACCAAGGTGGAGATCAAAC 446

```

RESULT 4

US-10-040-244-15
; Sequence 15, Application US/10040244
; Publication No. US20030059427A1
; GENERAL INFORMATION:
; APPLICANT: KIRIN BEER KABUSHIKI KAISHA
; APPLICANT: FORCE, WALKER F.
; APPLICANT: TAKAHASHI, NOBUAKI
; APPLICANT: MIKAYAMA, TOSHIFUMI
; TITLE OF INVENTION: ISOLATION AND CHARACTERIZATION OF HIGHLY ACTIVE ANTI-CD40
ANTIBODY
; FILE REFERENCE: 021286/0272501
; CURRENT APPLICATION NUMBER: US/10/040,244
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: 60/200,601
; PRIOR FILING DATE: 2000-4-28
; PRIOR APPLICATION NUMBER: PCT/US01/13672
; PRIOR FILING DATE: 2001-04-27
; PRIOR APPLICATION NUMBER: 09/844,684
; PRIOR FILING DATE: 2001-04-27
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 3.0
; SEQ ID NO 15
; LENGTH: 728
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-040-244-15

Query Match 93.4%; Score 362.4; DB 14; Length 728;
Best Local Similarity 95.9%; Pred. No. 1.8e-104;
Matches 372; Conservative 0; Mismatches 16; Indels 0; Gaps 0;

Qy	1	ATGGACATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC	60
Db	59	ATGGACATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC	118
Qy	61	AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA	120
Db	119	AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGA	178
Qy	121	GTCACCATCACTTGTTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT	180
Db	179	GTCACCATCACTTGTTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAG	238
Qy	181	AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC	240
Db	239	AAACCAGGGAAAGCCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC	298
Qy	241	CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG	300
Db	299	CCATCAAGGTTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTG	358
Qy	301	CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT	360
Db	359	CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTC	418
Qy	361	GGCCAGGGGACCAAGCTGGAGATCAAAC	388

US-10-693-629-65

US-10-693-629-65

Matches 372; Conservative 0; Mismatches 16; Indels 0; Gaps 0;

Qy 1 ATGGACATGATGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
Db 59 ATGGACATGAGGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 118

Qy 61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
Db 119 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGA 178

Qy 121 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
Db 179 GTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAG 238

Qy 181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
Db 239 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 298

Qy 241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300

```

Db      299 CCATCAAGGTTTCAGCGGCAGTGGATTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 358
Qy      301 CAGCCTGAAGATTTTGCACCTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
Db      359 CAGCCTGAAGATTTTGCACCTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTC 418
Qy      361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
Db      419 GGCCAAGGGACCAAGGTGGAGATCAAAC 446

```

RESULT 6

US-09-844-684-13

; Sequence 13, Application US/09844684

; Patent No. US20020142358A1

; GENERAL INFORMATION:

; APPLICANT: GEMINI SCIENCE, INC.

; APPLICANT: LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY

; TITLE OF INVENTION: HUMAN ANTI-CD40 ANTIBODIES AND METHODS OF MAKING SAME

; FILE REFERENCE: 21286/0276339

; CURRENT APPLICATION NUMBER: US/09/844,684

; CURRENT FILING DATE: 2001-04-27

; PRIOR APPLICATION NUMBER: US 60/200,601

; PRIOR FILING DATE: 2000-04-28

; NUMBER OF SEQ ID NOS: 15

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 13

; LENGTH: 716

; TYPE: DNA

; ORGANISM: Homo sapiens

US-09-844-684-13

```

Query Match          92.6%; Score 359.2; DB 9; Length 716;
Best Local Similarity 95.4%; Pred. No. 1.9e-103;
Matches 370; Conservative 0; Mismatches 18; Indels 0; Gaps 0;

```

```

Qy      1 ATGGACATGATGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
Db      47 ATGGACATGAGGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 106
Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
Db      107 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGCAGGAGACAGA 166
Qy      121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
Db      167 GTCACCATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAACAG 226
Qy      181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
Db      227 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 286
Qy      241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
Db      287 CCATCAAGGTTTCAGCGGCAGTGGATTGGGACAGATTTCACTCTCACCATCGGCAGCCTG 346

```



```

Qy      301 CAGCCTGAAGATTTTGGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
          |||
Db      347 CAGCCTGAAGATTTTGGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACGTT 406
          |||

Qy      361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
          |||
Db      407 GGCCAAGGGACCAAGGTGGAGATCAAAC 434
          |||

```

RESULT 7

US-10-040-244-13

; Sequence 13, Application US/10040244

; Publication No. US20030059427A1

; GENERAL INFORMATION:

; APPLICANT: KIRIN BEER KABUSHIKI KAISHA

; APPLICANT: FORCE, WALKER F.

; APPLICANT: TAKAHASHI, NOBUAKI

; APPLICANT: MIKAYAMA, TOSHIFUMI

; TITLE OF INVENTION: ISOLATION AND CHARACTERIZATION OF HIGHLY ACTIVE ANTI-CD40 ANTIBODY

; FILE REFERENCE: 021286/0272501

; CURRENT APPLICATION NUMBER: US/10/040,244

; CURRENT FILING DATE: 2002-06-17

; PRIOR APPLICATION NUMBER: 60/200,601

; PRIOR FILING DATE: 2000-4-28

; PRIOR APPLICATION NUMBER: PCT/US01/13672

; PRIOR FILING DATE: 2001-04-27

; PRIOR APPLICATION NUMBER: 09/844,684

; PRIOR FILING DATE: 2001-04-27

; NUMBER OF SEQ ID NOS: 17

; SOFTWARE: PatentIn Ver. 3.0

; SEQ ID NO 13

; LENGTH: 716

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-040-244-13

Query Match 92.6%; Score 359.2; DB 14; Length 716;

Best Local Similarity 95.4%; Pred. No. 1.9e-103;

Matches 370; Conservative 0; Mismatches 18; Indels 0; Gaps 0;

```

Qy      1 ATGGACATGATGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 60
          |||
Db      47 ATGGACATGAGGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCC 106
          |||

Qy      61 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGA 120
          |||
Db      107 AGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGCAGGAGACAGA 166
          |||

Qy      121 GTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAT 180
          |||
Db      167 GTCACCATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAACAG 226
          |||

Qy      181 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTC 240
          |||
Db      227 AAACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTC 286
          |||

```

```

Qy      241 CCATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTG 300
          |||
Db      287 CCATCAAGGTTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCGGCAGCCTG 346

Qy      301 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTT 360
          |||
Db      347 CAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACGTTTC 406

Qy      361 GGCCAGGGGACCAAGCTGGAGATCAAAC 388
          |||
Db      407 GGCCAAGGGACCAAGGTGGAGATCAAAC 434

```

RESULT 8

US-10-684-109-83

```

; Sequence 83, Application US/10684109
; Publication No. US20040175379A1
; GENERAL INFORMATION:
; APPLICANT: DeVries, Peter J.
; APPLICANT: Green, Larry L.
; APPLICANT: Ostrow, David H.
; APPLICANT: Reilly, Edward B.
; APPLICANT: Wieler, James
; TITLE OF INVENTION: Erythropoietin Receptor Binding
; TITLE OF INVENTION: Antibodies
; FILE REFERENCE: 6989.US.O2
; CURRENT APPLICATION NUMBER: US/10/684,109
; CURRENT FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: 10/269,711
; PRIOR FILING DATE: 2002-10-14
; NUMBER OF SEQ ID NOS: 115
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 83
; LENGTH: 752
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-684-109-83

```

```

Query Match          90.2%; Score 350; DB 17; Length 752;
Best Local Similarity 94.8%; Pred. No. 1.5e-100;
Matches 362; Conservative 0; Mismatches 20; Indels 0; Gaps 0;

```

```

Qy      7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCACAGGTTCCAGATGC 66
          |||
Db      1 ATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCACAGGTTCCAGATGC 60

Qy     67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
          |||
Db     61 GACATCCAGATGACCCAATCTCCATCTTCCGTGTCTGCATCTATAGGAGACAGAGTCTCC 120

Qy    127 ATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
          |||
Db    121 ATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy    187 GGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
          |||
Db    181 GGGAAAGCCCCCTACGCTCCTTATCTATGCTGCATCCACTTTGCAACGTGGGGTCCCATCA 240

```

```

Qy      247 AGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
          |||
Db      241 AGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 300

Qy      307 GAAGATTTTGCACCTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
          |||
Db      301 GAAGATTTTGCACCTTACTTTTGTCAACAGGCTAACAGTTTCCATTCACTTTTCGGCCCT 360

Qy      367 GGGACCAAGCTGGAGATCAAAC 388
          |||
Db      361 GGGACCAAGTGGATATCAAAC 382

```

RESULT 9

US-10-684-109-84/c

; Sequence 84, Application US/10684109

; Publication No. US20040175379A1

; GENERAL INFORMATION:

; APPLICANT: DeVries, Peter J.

; APPLICANT: Green, Larry L.

; APPLICANT: Ostrow, David H.

; APPLICANT: Reilly, Edward B.

; APPLICANT: Wieler, James

; TITLE OF INVENTION: Erythropoietin Receptor Binding

; TITLE OF INVENTION: Antibodies

; FILE REFERENCE: 6989.US.02

; CURRENT APPLICATION NUMBER: US/10/684,109

; CURRENT FILING DATE: 2003-10-10

; PRIOR APPLICATION NUMBER: 10/269,711

; PRIOR FILING DATE: 2002-10-14

; NUMBER OF SEQ ID NOS: 115

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 84

; LENGTH: 752

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-684-109-84

```

Query Match          90.2%;   Score 350;   DB 17;   Length 752;
Best Local Similarity 94.8%;   Pred. No. 1.5e-100;
Matches 362;   Conservative 0;   Mismatches 20;   Indels 0;   Gaps 0;

```

```

Qy      7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
          |||
Db      752 ATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 693

Qy      67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
          |||
Db      692 GACATCCAGATGACCCAATCTCCATCTTCCGTGTCTGCATCTATAGGAGACAGAGTCTCC 633

Qy      127 ATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
          |||
Db      632 ATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 573

Qy      187 GGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
          |||

```

```

Db      572 GGGAAAGCCCCCTACGCTCCTTATCTATGCTGCATCCACTTTGCAACGTGGGGTCCCATCA 513
Qy      247 AGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      512 AGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 453
Qy      307 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
        |||||||||||||||||| |||||||||||| |||||||| |||||
Db      452 GAAGATTTTGCAACTTACTTTTGTCAACAGGCTAACAGTTTCCCATTCACTTTTCGGCCCT 393
Qy      367 GGGACCAAGCTGGAGATCAAAC 388
        |||||||| ||| ||||||
Db      392 GGGACCAAGTGGATATCAAAC 371

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RESULT 10

US-10-292-088-23

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; Sequence 23, Application US/10292088
; Publication No. US20030211100A1
; GENERAL INFORMATION:
; . APPLICANT: BEDIAN, VAHE
; . APPLICANT: GLADUE, RONALD P.
; . APPLICANT: CORVALAN, JOSE
; . APPLICANT: JIA, XIAO-CHI
; . APPLICANT: FENG, XIAO
; . TITLE OF INVENTION: ANTIBODIES TO CD40
; . FILE REFERENCE: ABX-PF/3 US
; . CURRENT APPLICATION NUMBER: US/10/292,088
; . CURRENT FILING DATE: 2003-03-14
; . PRIOR APPLICATION NUMBER: 60/348,980
; . PRIOR FILING DATE: 2001-11-09
; . NUMBER OF SEQ ID NOS: 147
; . SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 23
; . LENGTH: 705
; . TYPE: DNA
; . ORGANISM: Homo sapiens
US-10-292-088-23

```

```

Query Match      89.8%; Score 348.4; DB 15; Length 705;
Best Local Similarity 94.5%; Pred. No. 4.9e-100;
Matches 361; Conservative 0; Mismatches 21; Indels 0; Gaps 0;

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```

Qy      7 ATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
        ||||| ||||| ||||||||||||||||||||||||||||||||||||||||
Db      1 ATGAGGCTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60
Qy     67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
        ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120
Qy    127 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 186
        |||||||||||||||||| ||||||||||||||||||||||||||||
Db    121 ATCACTTGTCGGGCGAGTCAGCCTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 180
Qy    187 GGGAAAGCCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
        |||||||||||||| |||||||| || |||| ||| ||||||||||||||||

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Db      181 GGGAAAGCCCCTAAACTCCTGATTTATTCTGCCTCCGGTTTGCAAAGTGGGGTCCCATCA 240
Qy      247 AGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 306
        |||
Db      241 AGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 300
        |||
Qy      307 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCAG 366
        |||
Db      301 GAAGATTTTGCAACTTACTATTGTCAACAGACTGACAGTTTCCCGCTCACTTTCGGCGGC 360
        |||
Qy      367 GGGACCAAGCTGGAGATCAAAC 388
        |||
Db      361 GGGACCAAGGTGGAGATCAAAC 382

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RESULT 11

US-10-292-088-47

; Sequence 47, Application US/10292088

; Publication No. US20030211100A1

; GENERAL INFORMATION:

; APPLICANT: BEDIAN, VAHE

; APPLICANT: GLADUE, RONALD P.

; APPLICANT: CORVALAN, JOSE

; APPLICANT: JIA, XIAO-CHI

; APPLICANT: FENG, XIAO

; TITLE OF INVENTION: ANTIBODIES TO CD40

; FILE REFERENCE: ABX-PF/3 US

; CURRENT APPLICATION NUMBER: US/10/292,088

; CURRENT FILING DATE: 2003-03-14

; PRIOR APPLICATION NUMBER: 60/348,980

; PRIOR FILING DATE: 2001-11-09

; NUMBER OF SEQ ID NOS: 147

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 47

; LENGTH: 705

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-292-088-47

```

Query Match      89.8%; Score 348.4; DB 15; Length 705;
Best Local Similarity 94.5%; Pred. No. 4.9e-100;
Matches 361; Conservative 0; Mismatches 21; Indels 0; Gaps 0;

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Qy      7 ATGATGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 66
        |||
Db      1 ATGAGGCTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60
        |||
Qy      67 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 126
        |||
Db      61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120
        |||
Qy      127 ATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 186
        |||
Db      121 ATCACTTGTCTGGGCGAGTCAGGGTATTTACAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180
        |||
Qy      187 GGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 246
        |||

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